AMERICAN GAS

Association

MONTHLY

JANUARY 1946 • VOL. 28 · NO. 1

AT The Yar

Connoisseurs gather nightly to pay homage to the epicurean cooking of Chicago's romantic Russian restaurant. Here, *old-world delicacies* —such as Blinis with Fresh Caviar and Sour Cream, and Chicken Kiev—are done to a turn by Gas, the world's most *modern cooking fuel!*

AT THE Toll House

Old Yankee recipes are cooked to perfection on gleaming new Gas ranges. Thick, juicy Lamb Chops, baked stuffed Lobster, feather-light Lemon Meringue Pies are just three of the specialties that make this historical eating place near Boston, the mecca of gourmets from all over the globe!

Where food is finest.... it's cooked with GAS

The most famous chefs have nothing on you! You've the same speedy, flexible and economical cooking fuel . . . right in your own kitchen. You . . . and 20 million other women wise to the wonders of flame-cookery! And soon—when you get *your* "New Freedom Gas Kitchen"*. . . cooking with Gas will be even easier and better than before. For the queen of that cooler, cleaner, individually-designed kitchen is a remarkable *new Gas range*. . . . with such wonderful automatic controls that even a bride can cook like an expert! Make your choice from the super-*modern* Gas ranges now on display at your Gas Company or dealer's. And always look for the CP seal! AMERICAN GAS ASSOCIATION

*Copyright 1945 American Gas Association

AT YOUR HOUSE

By comparison with the many dramatic events of world-shaking significance which history will record for 1945, the course of the gas industry may seem sober indeed. Yet, as President Boothby's report shows, the industry has emerged from the war and the reconversion period stronger than ever before. . . . The year saw the first months of operation of the great research and promotional program—the very inauguration of which demonstrated vitality and faith in a basic product. Results of this farsighted program will unfold in the coming months. . . . As a harbinger of things to come, the Residential Gas Section took its many-pronged promotional program to the country in an unprecedented series of meetings, thus providing a spearhead for activities in 1946. . . . In the A. G. A. itself, tried and respected leadership gave way to new blood when Major Forward handed down the mantle to Mr. Wolf after many years of outstanding service. Even A. G. A. headquarters underwent a face lifting—seemingly getting ready for the tempo of the atomic age. . . . A spirit of adventure is abroad; there will be exploration of new ideas, new fields, cultivation of old.

EDITORIAL OFFICES:
AMERICAN GAS ASSOCIATION
420 LEXINGTON AVE., NEW YORK 17, N. Y.

CONTENTS FOR JANUARY 1946

FEATURES

THE GAS INDUSTRY IN 1945—by Everett J. Boothby 3
UTILIZATION OF NATURAL GAS—by G. G. Oberfell 7
GET A LOAD OF THIS!—by G. M. Rohde, Jr. 15
LIVE BLUE FLAME FOR DISPLAYS—by D. W. Frye 19
GAS TOUR BLANKETS NATION 21
WE BELIEVE—by George Ketchum 27

SECTIONS

ACCOUNTANTS MAKE PLANS FOR 1946 32
REGIONAL HOME SERVICE WORK SHOPS PLANNED 34
SECTION MAPS YEAR'S PROGRAM 36
FIRST ALL-WELDED HOLDER IN MASSACHUSETTS—by Ralph C. Bauer and William R. Stevens 39
LABORATORIES' EXPANSION PROGRAM—by H. J. Hense 42

DEPARTMENTS

NEW A. G. A. MEMBERS 30
COMMITTEE CALENDAR 31
CONVENTION CALENDAR 31
GAS GRAPEVINE 38
INDUSTRIAL AND COMMERCIAL GAS ADVERTISING 38
PERSONAL AND OTHERWISE 44
OBITUARY 47
PERSONNEL SERVICE 48

● Subscription $3.00 a year - Published eleven times a year by the American Gas Association, Inc. Publication Office, American Building, Brattleboro, Vt. Publication is monthly except July and August which is a bi-monthly issue. Address all communications to American Building, Brattleboro, Vermont, or to 420 Lexington Ave., New York 17, N. Y. All manuscript copy for publication should be sent to the editorial offices in New York. The Association does not hold itself responsible for statements and opinions contained in papers and discussions appearing herein. Entered as Second Class Matter at the Post Office at Brattleboro, Vermont, Feb. 10th, 1922, under the Act of March 3, 1879. Cable addresses: American Gas Association, "Amerigas, New York"; American Gas Association Testing Laboratories, "Amerigaslab, Cleveland."

JAMES M. BEALL, *Editor*

The Gas Industry in 1945

BY EVERETT J. BOOTHBY

President, American Gas Association
Vice-President, Washington Gas Light Co.

DURING the year 1945 the gas industry completed its enviable record in the war effort and stood ready to meet the challenge of peace. The transition from a war-time to a peace-time economy was made with a minimum of dislocation and a maximum of efficiency. The industry continues to demonstrate the leadership of gas as the ideal fuel for residential, commercial and industrial use.

Customers of the gas utility companies number 20,156,000 at the end of 1945. This is the largest number in the history of the industry and represents an increase of 1.9% over the 1944 figure. Of this total, manufactured and mixed gas companies served 10,659,000 and natural gas companies served 9,497,000.

Revenues of the entire industry approximated $1,141,374,000—an increase of 3% over 1944. Natural gas revenues totaled $692,526,000 and manufactured and mixed gas companies $448,848,000.

•

Natural gas residential sales* increased 6.4%; commercial 3.6%; while industrial sales declined approximately 3.5%. Total marketed production of natural gas in 1945 was 3,689,200 Mcf.

Manufactured and mixed gas residential sales* increased 3.9%; commercial 14%; while industrial sales declined 4.2%.

Residential Gas

Manufacturers of domestic gas appliances during the second half of 1945 began rebuilding their engineering and research staffs as returning veterans became available. New domestic gas appliances will represent the ultimate in modernity, efficiency, convenience and economy, incorporating improvements determined by surveys made by the Association and leading consumer magazines.

The largest program of research in the domestic utilization field ever undertaken by the gas industry as a whole was carried out by the American Gas Association in 1945. The program will be still further expanded during 1946. There were a total of 21 projects active during the year, covering a range of technical subjects from automatic flash tube oven and broiler lighting to studies that will eliminate all traces of noise of extinction of burners in furnaces that heat homes.

1945 American Gas Association domestic research projects were carried on at the A. G. A. Testing Laboratories, Institute of Gas Technology, Case School of Applied Science, Battelle Memorial Institute and Purdue Research Foundation.

Industrial and Commercial Gas

Industrial gas sales were at an all-time peak during the war period. Curtailment of war production decreased this volume somewhat in 1945 below the previous year, but industrial gas is playing an important part in the nation's reconversion program. Further advances in industrial gas utilization were made and new equipment designed and installed incorporated many features resulting from war production experience.

Research and development of industrial furnaces, under the urgency of war requirements, have been greatly expanded and performance has again demonstrated that "it can be done better with gas".

•

At the close of the year the backlog of orders for industrial gas equipment is substantial. The automobile industry, for example, is installing paint drying and finishing ovens for bodies heated with the newer types of gas air heaters, of a far greater total capacity than before the war. As fast as materials can be secured the ceramic industry has been installing furnaces and kilns heated with the new high temperature radiant burners. Special machines that incorporate the newer

* Residential sales include gas used for house heating and other purposes.

● Opposite: Gas scrubbers at a manufactured gas "standby" plant of the Southern California Gas Co. in Los Angeles. This plant was converted for wartime production of butadiene. Photo was taken by Mel Jones of Southern California

types high speed, direct gas burners have played a prominent part in the reconversion of many production heat-treating shops. Industrial gas departments have been reorganized and enlarged to give better engineering services.

The use of commercial gas during 1945 was the most extensive in history. Restaurant, hotel and other public eating establishments comprise the most important sector of commercial gas uses. Not only did more people eat more meals away from home than ever before, but the increased quantities of food cooked had to be prepared on equipment installed to meet only the pre-war loads. Restaurant and hotel proprietors throughout the country have praised the performance of heavy duty gas cooking and baking equipment during this trying period.

A. G. A. Testing Laboratories

Major emphasis was again devoted to war service the past year principally on automatic oxygen regulators for transport planes. These were developed, designed and tested by the Laboratories. Approximately 40,000 of these regulators were furnished to the Air Forces, while in addition some 6,000 were repaired. The Laboratories also produced portable indicating instruments used in fire control equipment.

Research endeavors highlighted the Laboratories investigational activities. Technical aspects of six domestic gas research projects were completed and bulletins thereon were compiled. Regional conferences were held in Cleveland, Chicago, New York and Los Angeles.

Rehabilitated and re-equipped, the Laboratories are in excellent position to assist the gas industry with its reconversion problems.

New Freedom Gas Kitchen

The New Freedom Gas Kitchen program, initiated to increase acceptance of gas service in modern homes gained impetus during the year. The program has been presented directly or through utility company contacts in every state in the nation and in Canada. Inquiries concerning the program have been received from England, France, New South Wales, Venezuela, Argentina and Brazil.

Cabinet makers and appliance manufacturers have cooperated in the program or have initiated campaigns of a like nature. Plans for dimensionally coordinating kitchen cabinets have been agreed upon by manufacturers of wooden and steel cabinets. Outdoor posters and window displays have been made available to gas utility companies featuring New Freedom Gas Kitchens.

Home Service Activities

The Home Service Department of the gas industry continued active participation in war-time programs of nutrition, and food conservation. Special attention was given to the government school lunch program and the campaign for Better Breakfasts. In the food preservation program gas companies handled thousands of requests for recipes and directions to augment the limited sugar supply. Indications are that millions of quarts of food were preserved under the supervision of the Home Service Departments of the gas utility companies.

Government sources recognized the facilities of gas companies in directing information to many city women not otherwise reached and directed many releases specifically to Home Service Departments.

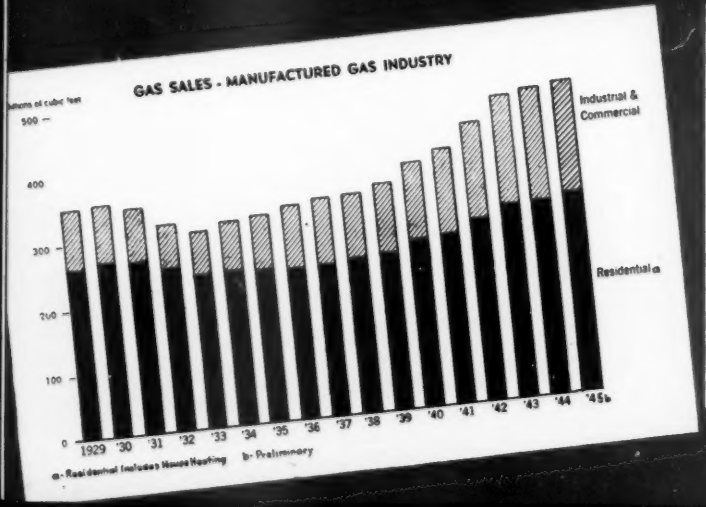
Demonstrations featured since V-J Day have centered around the brides of returning servicemen, also classes in nutrition held for school children. Kitchen Planning has also received the full support of Home Service Departments.

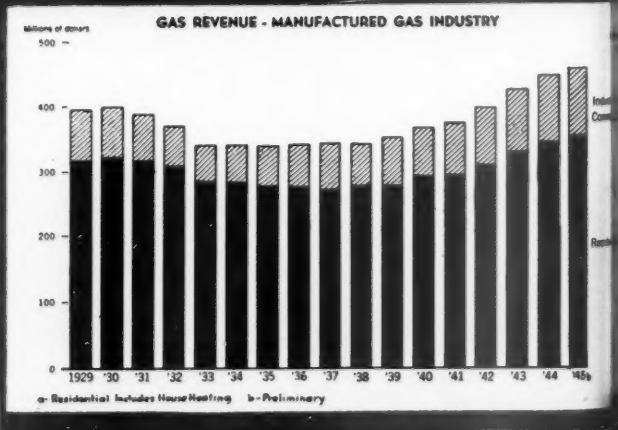
Research and Promotional Plan

History has recorded the first fiscal year (October 1, 1945) of the industry's research and promotional operation. Net subscriptions totaling $1,075,330 were received from gas and pipeline companies in the United States and Canada. An additional subscription of $160,000 to be applied to the National Advertising Program was received from more than 150 gas appliance and equipment manufacturers.

The Research and Promotional plan contemplates the expenditure of $1,000,000 collected annually over a three-year period for research, national advertising and promotional effort, in addition to normal activities financed through the American Gas Association membership dues and to that portion of the National Advertising Program being financed through direct contributions to that fund. Of this additional $1,000,000 per year, $600,000 is set aside for research, $200,000 for addition to the national advertising fund and $200,000 for general promotional activities.

The funds collected under the plan are controlled by a special committee responsible under the general supervision of the Executive Board of the Asso-





ciation to the contributing companies. The committee makes allocations only on the recommendation of four major committees—Committee on Coordination of Research, Production Research Committee of the Manufactured Gas Department, Promotional Committee and National Advertising Committee.

During the first fiscal year of operation of the plan, there was authorized a total expenditure of $463,402. A balance amounting to $611,928 is available for future expenditure. Although the fiscal year commenced October 1, 1944, the funds were not available until March 1, 1945. The plan, therefore, actually operated only in the seven months ended September 30, 1945. It is estimated the total subscriptions for 1946 will approximate $1,160,000. Expenditures will approximate $743,000 for research, $200,000 for national advertising, $200,000 for promotion and $17,000 for miscellaneous.

A promotional director is now initiating a comprehensive and well integrated program which will be coordinated with the promotional activities of individual gas companies, their dealers and all related industries.

National Advertising

The gas industry has just entered upon its tenth consecutive year of national advertising with an appropriation of $872,000, an increase of 60 per cent over 1944, of which the manufacturers of gas appliances and equipment contributed $160,000. Consumer advertising featured the latest trends and advances in kitchen design and planning. This campaign will be supplemented by the addition of a new series on major gas appliances and important recent developments in the field of domestic cookery, including comfort-conditioning of kitchens through new ventilation systems developed by gas industry research. National magazines carrying such advertising have a combined circulation of 45 million, and represent approximately 20 different publications.

An enlarged budget for industrial and commercial advertising will make possible the coverage of a number of important fields. Appearing exclusively in trade and college publications, the 1945-46 program has been designed to maintain industrial and commercial gas in its present strong position of leadership. Approximately 62 different publications will be used.

A substantial increase in the use of newspaper advertising space by local gas companies as a tie-in with the Association's national advertising program was evident during the year. The volume of newspaper mats sold to gas companies established a new record.

Natural Gas Expansion

During the year the natural gas industry has expanded its facilities to meet constantly increasing demands. Extensions have been made in a number of cities and transmission lines from Texas to Ohio, Western Kansas to Michigan, and Texas to California are now in process of government review. They are to supplement the existing supply.

New projects have been approved for increasing deliveries to the Appalachian region and are contemplated for the Chicago area. Continued exploration and development have kept the reserves of natural gas abreast of demands, reserves now being estimated at between 150 and 200 trillion cubic feet, assuring a supply for more than thirty years.

Conclusion

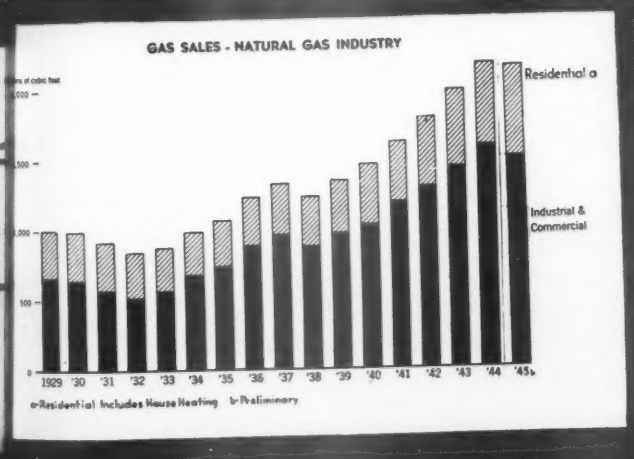
Normal Association activities were enlarged during the year. A new Publicity Bureau was established and regularly distributes news items of general interest on the gas industry. Financial statistical data on the gas industry is being furnished to the leading financial organizations in the country. News of the Research and Promotional program has been favorably received by the financial world.

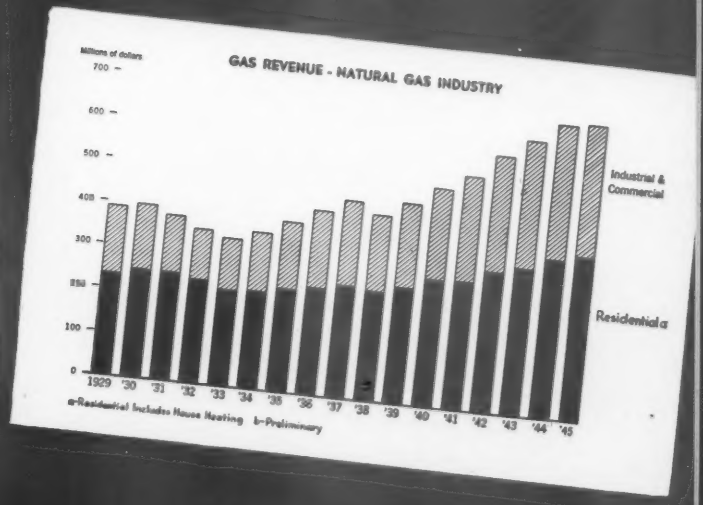
The Association has materially strengthened its statistical bureau. It will in the near future furnish special economic and market studies for the use of the industry and financial institutions.

The gas industry devoted increased attention during the year to industrial relations problems. Conferences were held in several sections of the country attended by industrial relations executives. These conferences aided in maintaining operating forces under war conditions and in interpreting government regulations affecting personnel. After V-J Day attention was directed toward providing satisfactory reemployment of returned veterans.

During the past year the Rate Committee of the American Gas Association continued the study of the best types of rates to be applied to various classes of consumption. Their findings will be of much value during the postwar period.

During the year Major Alexander Forward retired after 22 years of service to the American Gas Association, and


GAS SALES - NATURAL GAS INDUSTRY
Residential a
Industrial & Commercial
1929 '30 '31 '32 '33 '34 '35 '36 '37 '38 '39 '40 '41 '42 '43 '44 '45b
a-Residential Includes House Heating b-Preliminary



MANUFACTURED AND MIXED GAS—1945*

	1945	1944	Per Cent Change
CUSTOMERS:			
Total	10,659,000	10,502,000	+ 1.5
Residential†	10,194,000	10,062,000	+ 1.3
Commercial	419,000	396,000	+ 5.8
Industrial	36,000	34,000	+ 5.9
Other	10,000	10,000	—
SALES (MCF):			
Total	491,339,000	476,342,000	+ 3.1
Residential†	311,604,000	300,045,000	+ 3.9
Commercial	65,055,000	57,089,000	+14.0
Industrial	110,454,000	115,267,000	— 4.2
Other	4,226,000	3,941,000	—
REVENUES:			
Total	$448,848,000	$431,471,000	+ 4.0
Residential†	344,295,000	331,432,000	+ 3.9
Commercial	54,826,000	48,880,000	+12.2
Industrial	47,253,000	48,880,000	— 3.3
Other	2,474,000	2,279,000	—

* Preliminary estimates by A. G. A. Statistical Department.
† Includes house heating.

NATURAL GAS—1945*

	1945	1944	Per Cent Change
CUSTOMERS:			
Total	9,497,000	9,270,000	+ 2.4
Residential†	8,772,000	8,578,000	+ 2.3
Commercial	665,000	635,000	+ 4.7
Industrial	58,000	55,000	+ 5.5
Other	2,000	2,000	—
SALES (MCF):			
Total	2,148,925,000	2,156,897,000	— 0.4
Residential†	594,243,000	558,511,000	+ 6.4
Commercial	186,111,000	179,558,000	+ 3.6
Industrial	1,326,265,000	1,374,134,000	— 3.5
Elec. Gen.	330,386,000	352,015,000	— 6.1
Other Ind.	995,879,000	1,022,119,000	— 2.6
Other	42,306,000	44,694,000	—
REVENUES:			
Total	$692,526,000	$676,686,000	+ 2.3
Residential†	377,535,000	358,251,000	+ 5.4
Commercial	76,706,000	73,140,000	+ 4.9
Industrial	231,961,000	239,553,000	— 3.2
Other	6,324,000	5,742,000	—

* Preliminary estimates by A. G. A. Statistical Department.
† Includes house heating.

COMBINED GAS TOTALS*

	1945	1944	Per Cent Change
CUSTOMERS:			
Total	20,156,000	19,772,000	+ 1.9
Residential†	18,966,000	18,640,000	+ 1.7
Commercial	1,084,000	1,031,000	+ 5.1
Industrial	94,000	89,000	+ 5.6
Other	12,000	12,000	—
REVENUES:			
Total	$1,141,374,000	$1,108,157,000	+ 3.0
Residential†	721,830,000	689,683,000	+ 4.7
Commercial	131,532,000	122,020,000	+ 7.8
Industrial	279,214,000	288,433,000	— 3.2
Other	8,798,000	8,021,000	—

* Preliminary estimates by A. G. A. Statistical Department.
† Includes house heating.

H. Carl Wolf, former president of the Atlanta Gas Light Company, was appointed managing director. Mr. Wolf is well equipped and will play a very important part in directing the vastly expanded program of research, sales promotion and advertising and also in administering the general affairs of the Association.

History is about to record a new era. It is sure to be one of the most interesting ever recorded. What it will bring in world economic conditions is not known but the gas industry is prepared. We have the unified effort of all those interested. We have the active support of each member of the Association. There can be but one result—our industry will function in a manner of which we all will be justly proud.

Real Gas Flame Burns on Victory Loan Symbol

A beautiful fifty-foot Victory Loan symbol with a flaming gas torch was erected in front of Detroit's City Hall for the recent campaign. The Industrial Department of Michigan Consolidated Gas Company designed the gas flame burning equipment and put it into operation, an event accompanied by considerable ceremony. The flame was kept burning day and night for the duration of the Victory Loan drive and it attracted widespread attention and favorable comment for its originality and realistic appearance

Utilization of Natural Gas

A comprehensive discussion of present natural gas uses, future possibilities as a fuel and chemical raw material, together with an analysis of estimated reserves

This highly informative picture of the natural gas industry and its future prospects was taken from a paper presented by the author before the Chicago section of the American Institute of Mining and Metallurgical Engineers, December 5, 1945. Due to space limitations, a considerable portion of the original presentation has been deleted.

BY G. G. OBERFELL

Vice-President in Charge of Research and Development, Phillips Petroleum Co., Bartlesville, Okla.

ALTHOUGH the largest volume use of natural gas has been, is and in all probability will continue to be as a fuel for domestic and industrial heating, the various market outlets for natural gas, both as a fuel and as a raw material for the chemical industry, continue to be an interesting subject, particularly in this period of unexcelled industrial and research activity. Much has been written in recent years on the subject of natural gas, as is evident from the voluminous literature. The best that I can hope to do in this paper is attempt to condense and correlate the available information and make predictions as to the probable future of the natural gas industry.

Preferred Fuel

Natural gas is considered a preferred type of fuel for domestic uses and also for various industrial heating applications where ease of control, fuel uniformity, freedom from ash, etc., are of primary importance. Other industrially important uses are as a source of carbon black and as a fuel in various low cost heating operations. There is also a large number of other uses of varying degrees of importance and new potential uses are continually being uncovered. Some of these other uses are of economic importance to the gas industry as a whole but by far the greater majority of them involve such small volumes of gas that they are only of passing interest.

To facilitate consideration of the various items, it is proposed to discuss the following items in the order listed:

A. Present uses of natural gas.
B. Future possibilities of natural gas as a fuel and as a chemical raw material.
C. Fuel reserves.

This order of discussion assumes that the reserves of natural gas are adequate. It might appear more logical to discuss fuel reserves first, but since they are so profoundly influenced by political, social, economic and other factors, it appears best to treat this subject after we have considered present and future possible uses for natural gas. It is believed by this approach that the relative importance of the various present and potential outlets can best be demonstrated.

Present Uses of Natural Gas

Some clarification of the terminology employed in this discussion may be advisable at this point. Natural gas, as the producer refers to it, is primarily a complex mixture of compounds of carbon and hydrogen, chiefly of the paraffin series of hydrocarbons, principally methane, together with ethane, propane, butanes, pentanes and traces of still higher boiling hydrocarbons. In addition to the hydrocarbons, nitrogen, helium, carbon dioxide, sulfur compounds, and other inerts are occasionally present in appreciable quantities in natural gas. The natural gas which reaches the consumer, however, has had removed from it in practically all instances the major portion of the higher boiling hydrocarbon components and consists of a mixture, usually 80 to 95 per cent, of methane and ethane.

The extracted compounds, which are ultimately resolved into such products as natural gasoline and liquefied petroleum gas, are removed from the raw field gas for economic reasons and also because such materials, even when present in small amounts, tend to cause operating difficulties due to condensation in transmission lines.

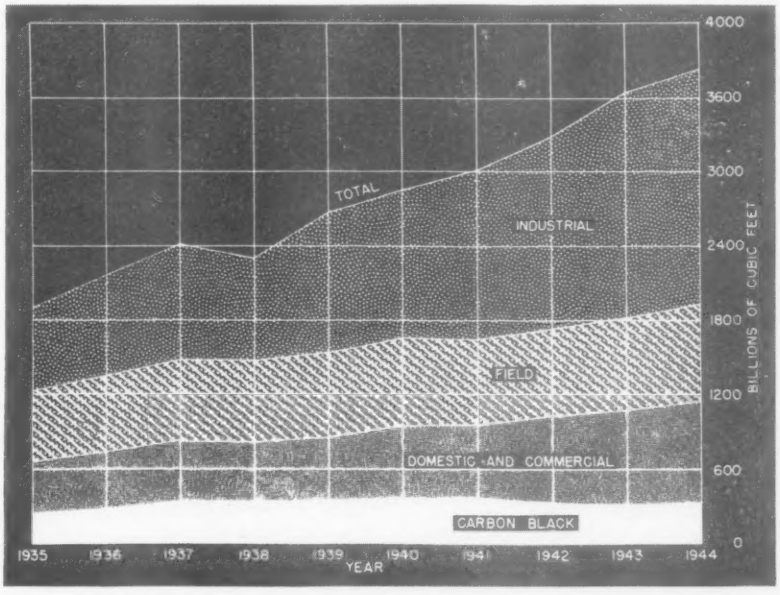


Fig. 1. Annual consumption of natural gas in the United States

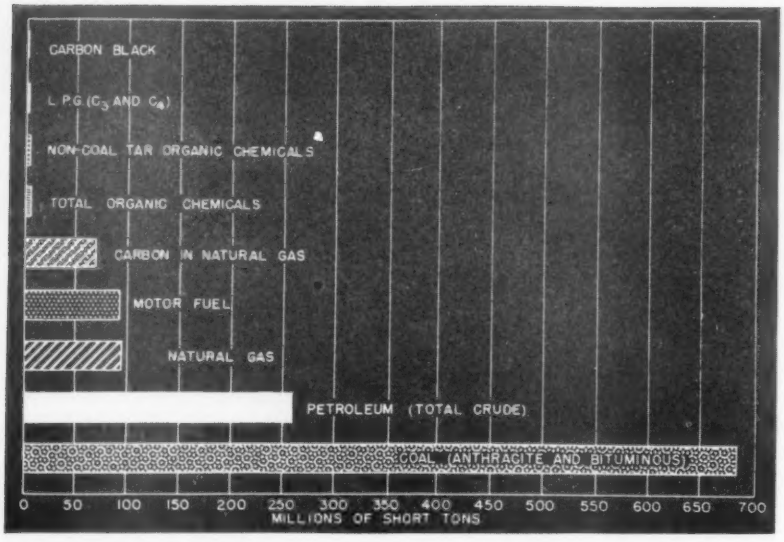

CARBON BLACK
L.P.G. (C_3 AND C_4)
NON-COAL TAR ORGANIC CHEMICALS
TOTAL ORGANIC CHEMICALS
CARBON IN NATURAL GAS
MOTOR FUEL
NATURAL GAS
PETROLEUM (TOTAL CRUDE)
COAL (ANTHRACITE AND BITUMINOUS)
0 50 100 150 200 250 300 350 400 450 500 550 600 650 700
MILLIONS OF SHORT TONS

Fig. 2. Marketed production statistics of fuels and related materials for 1944

The natural gas of commerce is the residual gas resulting from extraction or treating operations, while the extracted liquefied gas products, together with an approximately equal quantity of similar material resulting from the refining of crude oil, constitute an important complementary fuel material known to the trade as LPG (liquefied petroleum gas) or "Bottled Gas." This distinction between raw field gas, residual or so-called pipeline gas, and liquefied petroleum gas must be maintained in the examination of natural gas statistics for the reason that many of the current uses and potential uses are limited to one or another of these products. As an example, most of the current chemical uses of gas are based on liquefied petroleum gas as the raw material.

Present consumption rates of natural gas are at an all-time peak as will be noted from Figure 1.[3, 4] Undoubtedly, the wartime peak of industrial activity is responsible for at least a portion of the increase noted for the last several years.

Industrial use includes all gas consumed in industrial establishments as fuel, as a source of power, and as a medium for the maintenance of controlled furnace atmospheres. It does not include the fuel consumed in commercial establishments, which volumes are included in the totals for domestic and commercial fuel. Industrial use also includes the small amounts of gas which enter chemical operations. No satisfactory information exists as to the exact amounts of gas entering the chemical field but, from available figures on the total production of organic chemicals, it can be concluded that the amounts so used are trivial in terms of total gas demand.

The volumes shown for domestic and commercial purposes cover fuel used principally for heating in domestic and commercial establishments. "Field" use of natural gas represents that used in field operations, which includes the generation of power for drilling, reconditioning and pumping wells, and other purposes. Volumes designated as "Carbon Black" require no further explanation. Using the 1944 figures as a basis, it appears that about 50 per cent of the total volume of gas was used in industrial operations of various kinds, about 20 per cent as domestic and commercial fuel, another 20 per cent in field uses at the source of the gas, and the balance, about 10 per cent, in the carbon black industry.

TABLE I

MARKETED PRODUCTION OF FUELS AND RELATED MATERIALS FOR THE YEAR 1944

	Weight (Thousands of Short Tons)	*Volume*		
		Heat Value (Trillions of B.t.u.'s)	*(Billions of Cubic Feet)*	*(Thousands of Barrels)*
Total Coal (Anthracite and Bituminous) [1]	683,315	17,967	——	——
Petroleum (Total Crude) [2]	257,198	10,066	——	1,677,744
Natural Gas [3]	92,555	4,115	3,829	——
Motor Fuel [4]	92,232	——	——	732,000
Carbon in Produced Natural Gas [5]	69,416	——	——	——
Total Organic Chemicals [6]	7,000	——	——	41,667
Non-Coal Tar Organic Chemicals [7]	5,000	——	——	29,762
Liquefied Petroleum Gas [8]	2,160	89	29	21,562
Carbon Black [9]	400	——	——	——

[1] March 1945 "Survey of Current Business," U. S. Department of Commerce Bureau of Foreign and Domestic Commerce. Assuming for Anthracite—13,600 B.t.u. per lb. and for Bituminous—13,100 B.t.u. per lb.

[2] Mineral Industry Surveys, U. S. Department of Interior Bureau of Mines, December, 1944 issue. Assuming 7.3 lb. per gal. and 6,000,000 B.t.u. per bbl.

[3] Assuming 48.35 lb. per M cu. ft. and 1,075 B.t.u. per cu. ft.

[4] Assuming 2 million barrels per day, density 6 pounds per gallon.

[5] Assuming carbon content of natural gas 75 per cent by weight.

[6] Based on data from Chem. & Met. Eng. *52*, 130 (1945). Assuming 8 lb. per gal.

[7] Includes chemical products of agriculture, products prepared from calcium carbide, petroleum chemicals, liquefied gas chemicals and chemical derivatives of natural gas. Does not include chemicals produced for use in aviation fuel or explosives and other chemicals made at government ordnance plants or private units producing under ordnance control. Data from Chem. & Met. Eng. *52*, 130 (1945). Assuming 8 lb. per gal.

[8] Assuming 4.77 lb. per gal., 32 cu. ft. of gas per gal., and 98,000 B.t.u. per gal.

[9] Calculated on the basis of 800 million pounds of channel and furnace black, Mineral Market Report No. MMS, U. S. Dept. of Interior, Bureau of Mines, June 26, 1945.

Energy Consumption

It is of interest to examine briefly some statistics on the percentages of the total energy represented by the B.t.u. contents of our principal fuel. Since the increase in energy consumption was far more rapid than the increase in population during the period 1900 to 1944, variations in the amount of energy per capita were computed. The total energy per inhabitant in the United States in 1944 was approximately 2½ times that in 1900. Likewise, total energy for 1944

was approximately 1¼ times that for 1929. Natural gas and petroleum have shown a relatively steady increase in quantity of energy; on the other hand the total B.t.u. content of coal produced in 1944 exceeded, for the first time, its all-time peak which was established in 1918.

The increase in total energy made available by the production of natural gas and petroleum is traceable almost entirely to the development of adequate pipe lines and to the uses of petroleum which have resulted from the development of automotive transportation. It is quite probable that an appreciable proportion of the pronounced increase shown for natural gas and petroleum is traceable to taking full advantage of existing investments, in production, processing, transportation, and distribution facilities. For example, underloaded pipe lines are a strong incentive for developing markets or securing loads which will result in utilizing the full capacity of existing systems.

Returning to Figure I we note that whereas natural gas is used most extensively for fuel purposes, the carbon black industry is the next largest consumer of natural gas. This outlet, which is near the source of gas supply, is of interest to the gas industry since it usually exists only in the absence of adequate pipeline facilities. The history of carbon black manufacture has been that this operation is discontinued when fuel pipe lines become adequate to handle the gas. The quantities of gas consumed testify to the importance of carbon black even though it is often regarded as a transient use, subsidiary to the fuel use.

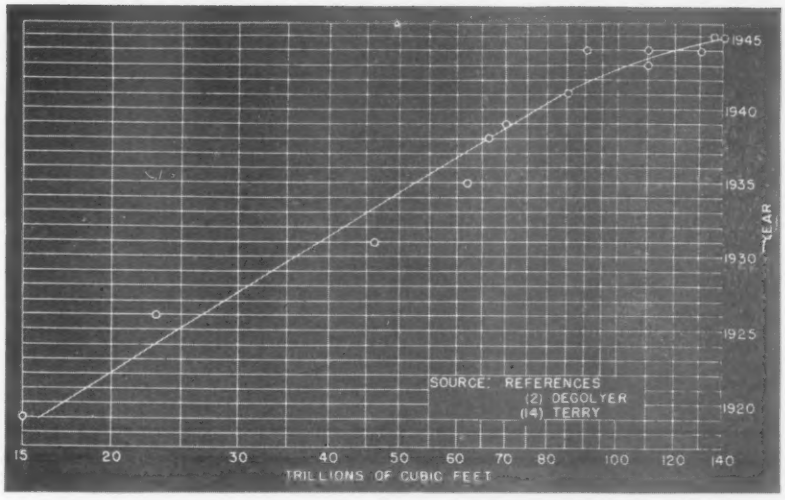


Fig. 4. Natural gas reserves in the United States

Some consideration should also be given to the volumes of natural gasoline consumed since these are a part of raw natural gas. The natural gasoline product itself is of no direct interest to the gas industry since its chief outlet is as an ingredient of motor and aviation gasolines, but a large volume of pipeline quality natural gas has been made available to the gas industry as a result of natural gasoline plant operations.

The consumption statistics for liquefied petroleum gases show steady rapid growth. The principal uses are for fuel and only 16.8 per cent of the 1944 gallonage found its way into the chemical outlets. These estimates do not include the butane and butylenes used in the production of synthetic rubber or of similar products used in the manufacture of 100 octane gasoline.

In Table I and Figure 2, the 1944 marketed production data[3, 6] for different fuels are presented along with certain other materials for comparison. The combined tonnages of petroleum, liquefied gas, and natural gas are equal to about 51 per cent of the coal tonnage. The tonnage represented by natural gas alone is about 14 per cent of the coal tonnage. While total non-coal tar organic chemicals amount to only about 5 per cent of the natural gas tonnage, only a minor portion of this quantity was of natural gas origin. Few people are aware of the tremendous tonnages represented by gaseous fuels.

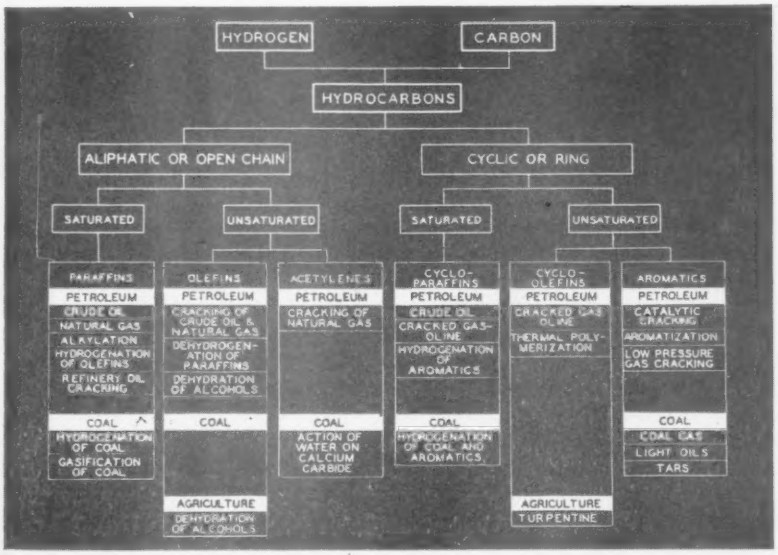


Fig. 3. Hydrocarbon classification and important sources

Future Prospects for Natural Gas

Various social, political and economic factors, in addition to such items as form utility and place value, investments in existing facilities, and future technical developments will exert their influences in varying amount on future gas utilization. Politically, subsidies and taxes could markedly influence the use of natural gas. The subsidies granted for distribu-

tion of electric power through the Rural Electrification Administration have not had a counterpart to date in natural gas or hydrocarbon fuel distribution. On the other hand, the taxes on motor fuel in some instances now exceed the selling price of the motor fuel at the refineries.

Through such taxation, it is possible to retard new developments or conversely, through subsidies of one form or another, it is possible to bring into being at an earlier date operations which would normally be considered uneconomical. For example, synethic rubber was a war justification. In my opinion, the influence of Government, through both subsidies and taxes, will be far greater than any other single factor on the future production, distribution and utilization of fuels.

Inasmuch as coal, petroleum, liquefied petroleum gas, and natural gas are in a sense different forms of carbon, it becomes obvious that, in many potential applications of these materials as fuel, the form value may markedly influence the economic justification for their use. These physical forms (solid, liquid and gaseous states) are important factors in determining the amount of investment necessary for production, transportation and utilization of these materials. Similarly, proximity to existing supplies of gas, oil or coal, especially when such fuels are available part of the time on an incremental cost basis, may result in uses based primarily on place utility. In such cases, comparative costs on a B.t.u basis alone may not be the decisive factor.

The importance of existing investments in producing, manufacturing and transportation facilities must be considered also. Underloaded gas transportation systems may be used to transport additional volumes of gas at very low costs since in such instances the only extra costs incurred are those for handling the additional volumes (the so-called incremental costs). In marketing of all types of fuel, intermittently available supplies can be sold at abnormally low rates, still realizing attractive profits. Such underloaded facilities may be employed to handle additional quantities of fuel or raw material for the normally less attractive markets or they may be used to support a new development. For example, in specific cases processing facilities for natural gas and natural gasoline may enable one to lower overall costs of operation of a Fischer-Tropsch process for producing liquid fuel from natural gas. Likewise some war facilities may become useful in reducing investments for fuel distribution.

Faced with these important background factors, none of which can be ignored, the future possible outlets for natural gas constitute an interesting field for conjecture. Since the primary use of natural gas has been as a fuel, and since, in this application there has been and apparently will continue to be a steady and uninterrupted increase in the volumes so utilized, the most immediate prospect is one of domestic and industrial load building.

For the past ten years[3] the domestic natural gas load (home use) has shown a consistent increase. During this period this load has increased 87 per cent. The increase in 1944 over 1943 was 9.4 per cent. During the last year the increase in number of customers[5] was 2.8 per cent. This greater percentage increase in gas load than in number of customers illustrates the generally accepted theory that natural gas is gaining in acceptance by its present users. One can immediately recognize the stability and strength of this load.

At the end of 1944 there were 8,578,000[5] domestic users of natural gas, the number having increased 16 per cent since 1935.

An increasing domestic gas load can be expected as our population turns away from the many inconveniences and deficiencies of outmoded heating appliances. Expansion into the fields of gas-fired refrigeration, summer air conditioning, space heating and water heating offer additional possibilities as domestic load builders. However, gas will have competition for the expanded, domestic load, with the chief competitor in the fields of domestic refrigeration, cooking and water heating continuing to be electricity. It can be expected also that the use of the complementary fuel, liquefied petroleum gas, will be greatly extended in the domestic field, primarily in suburban areas and in localities where gas distribution facilities are not available.

Industrial Prospects Bright

The prospects for natural gas as an industrial fuel over the next several years appear to be bright since we are undoubtedly entering a period of extreme industrial activity. Those industrial loads where uniformity of fuel and close control of heating operations are of more importance than the cost per heat unit will undoubtedly be retained by natural gas and liquefied petroleum gas, and some further extensions can be expected.

The present use of gas for carbon black manufacture may be expected to decrease gradually in favor of the more profitable fuel markets. Of interest in this connection is the recent development on a commercial scale of an extremely flexible carbon black process which employs fuel oil and other liquid hydrocarbons as the starting material and which produces a much wider variety in quality of blacks than is possible by other well known processes. The success which the product of this process has met in various carbon black applications gives us reasonable assurance of a source of carbon black when gas no longer will be available for its production at prices that will enable its present wide use.

Much publicity has been given the postwar possibilities of chemicals, particularly the organic chemicals. Since the organic chemicals are "carbon chemicals," it follows that petroleum, natural gas, coal, agricultural and for-

How

● Keep skid chains on your tongue. Cultivate a low, persuasive voice. *How* you say it often counts more than *what* you say.

Make promises sparingly and keep them faithfully, no matter what it costs.

Never let an opportunity pass to say a kind and encouraging thing to or about somebody. Praise good work done, regardless of who did it. If criticism is merited, criticize helpfully, never spitefully.

Be interested in others; interested in their pursuits, their welfare, their homes and families. Make merry with those who rejoice and mourn with those who weep. Let every one you meet, however humble, feel that you regard him as a person of importance.

Be cheerful. Keep the corners of your mouth turned up. Hide your pains, worries, and disappointments under a pleasant smile. Laugh at good stories and learn to tell them.

Preserve an open mind on all debatable questions. Discuss but don't argue. It is a mark of superior minds to disagree and yet be friendly.

—*The Broadcaster, Investors Syndicate*

est products are the primary raw materials. Extensive progress has already been made in the manufacture of chemicals from petroleum, and a substantial part of this progress has been accomplished by companies interested more in chemicals than in petroleum products. Strictly speaking, all compounds are chemicals, but the petroleum industry is rapidly beginning to think of chemicals as all of those new products from petroleum which are not used as fuels or lubricants.

Obviously the introduction of chemical knowledge in refinery technique will intensify the interest of refiners in the manufacture of chemicals. But more important than this is the abundance and variety of chemical raw materials resulting from the production and processing of oil and natural gas. Furthermore, many of the hydrocarbon raw materials available in the petroleum industry are in effect by-products of the many processes which are used by the refining industry, and for this reason they are ordinarily cheaper than raw materials from other sources. These facts are going to be important factors in the further development of chemicals from petroleum or natural gas.

In Figure 3 is shown a skeleton diagram of the hydrocarbon family. The diagram presents the manner in which the chemist classifies the hydrocarbons and shows where they are found or produced.

Chemical "Conversion" State

In considering the manufacture of a chemical, the "conversion" state of the raw material to be used in the process is an important economical factor. All other things being equal, the less the number of steps through which the chemical raw materials must pass before emerging as a finished chemical product, the simpler and more economical will be the manufacturing process. Thus it is easily seen that petroleum as a source of gasoline, process-wise, is two steps ahead of coal, which must be converted into synthetic crude oil by two steps: first, that of manufacturing hydrogen and, second, that of hydrogenating the coal. A similar line of reasoning applies to natural gas as a preferred raw material, as compared with coal, for producing liquid fuel by the Fischer-Tropsch process.

The manufacture of chemicals from oil and natural gas is certain to increase, and the petroleum companies will undoubtedly place more and more emphasis on this activity. However, the manufacture of chemicals, as compared with the manufacture of fuels and lubricants, calls for a different type of operations, characterized in particular by small quantities, higher investments, higher costs, higher research budgets, a higher degree of technical skill, and a higher obsolescence of process and product; that is, shorter life of process and product.

Considering these differences, it is evident that the petroleum refiner may find it more expedient to manufacture intermediate raw materials for the chemical companies than to manufacture the finished chemicals. This is a procedure which is already being followed to a great extent. Many of the chemical companies have located their chemical plants adjacent to refineries on account of the cheap and abundant supply of by-product raw materials and on account of the widespread location of refineries throughout the United States which affords another economic advantage, namely, that of nearness of raw material to the markets for the finished chemical products. This is a trend which no doubt will continue until other economic factors change the picture.

Lest the impression be left that the chemical field is an unlimited one so far as market outlets for large volume of raw materials are concerned, it is well to point out how relatively small such outlets generally are for these raw materials. Thus it was calculated recently that the entire 1944 production of wood alcohol could have been produced from a single gas well of 15 million cubic feet daily capacity if near perfect conversion efficiencies were obtained. This means that the potential production, if realized, from only one of our larger gas wells would have completely supplied this whole market. Similarly, if all of the ethane and ethylene present both in the gases at refineries and in the raw natural gases during 1944 had been converted to ethyl alcohol (generally called grain alcohol), the production of ethyl alcohol would have amounted to about eight times the total requirement estimated for 1944 and forty times the amount of ethyl alcohol produced in 1940. If the entire potential supply of normal butane in 1944 had been used to produce butadiene for the manufacture of synthetic rubber, the amount of butadiene thereby manufactured, under present conversion efficiencies, would have been four times its demand.

Fig. 5. Distribution of the proven natural gas reserves

Summarizing, it is interesting to note that the chemical uses today represent considerably less than one per cent of the total natural gas consumed, this volume being of about the same order of magnitude as the unavoidable losses occurring under the most efficient operations encountered in the best engineering and safety practices of the industry, using the most advanced technology.

TABLE II

COSTS OF GASOLINE PRODUCTION BY FISCHER–TROPSCH PROCESS[7]

	Investment Per Bbl. Motor Gasoline/day (Dollars)	*Direct Costs, Including Normal Overhead but Excluding Depreciation, (c/gal.)*	*Total Costs Including Normal Overhead and 10% Depreciation, (c/gal.)*
European Design Starting from Coal	7600	14.7 [1]	19.2
European Design Starting from Dry Natural Gas	4750	6.0 [2]	8.8

[1] Coal at $2.75 per ton.
[2] Natural gas at 5c/M.

Thus the manufacture of chemicals does not promise to create any large volume of sales of natural gas.

Another possibility of a new outlet for natural gas is in the conversion of dry natural gas into liquid fuel hydrocarbons by means of the so-called Fischer-Tropsch process. The large mass of information which has been accumulated, as a result of research and development both here and abroad, permits a rough estimate of the process as a means of gas utilization.

Motor Fuel from Methane

From 1,000 cu.ft. of methane, allowing none for fuel requirements, it is theoretically possible to obtain about 6.5 gallons of motor fuel. The fuel value of this 6.5 gallons of motor fuel would be about 75 per cent of the fuel value of the original 1,000 cu.ft. of methane. Therefore, the maximum fuel value recoverable is about 75 per cent. In practice, however, even with 100 per cent reaction efficiency as above, some methane will be required for fuel purposes. Consequently yields will always be less than 75 per cent of the fuel value of the methane used to produce it. Improved reaction efficiencies, and, particularly improved techniques of synthesis gas production will no doubt reduce the amount of gas required with the result that net yields as high as 4.5 to 5.0 gallons per 1,000 cu.ft. may be obtained in large scale operations.

For every cent of cost per M cubic feet of methane with 50 per cent of the fuel value converted to gasoline, the raw material cost alone will be one-quarter cent per gallon of gasoline. The competitive position of natural gas with respect to coal as a raw material for Fischer-Tropsch type processes in the United States will depend upon the relative economics, efficiencies of utilization and over-all reserves of coal and natural gas available. Table II shows conservative published estimates of the relative cost of producing gasoline using coal and natural gas as the starting material. Costs for gasoline manufactured from natural gas as low as 5 cents per gallon have appeared in the literature, based on 10 per cent return on investment and assuming certain favorable local conditions. At any rate, there is general agreement that gasoline from dry natural gas as a starting material is cheaper to produce than the same product from coal as the raw material.

Table III shows the potential gasoline which could be produced from proven reserves of oil, gas and coal assuming 50 per cent yield from crude oil by conventional refining process and conversion of the natural gas and coal to gasoline by the Fischer-Tropsch process.

Although the conversion of natural gas may be important from the standpoint of augmenting raw materials for liquid fuel manufacture at costs not far from present costs, it cannot be considered an ultimate solution of the question. In short, the utilization of natural gas for hydrocarbon synthesis represents an "intermediate," but important, process and as such has greater immediate interest than coal. Modifications of the Fischer-Tropsch process, using natural gas will undoubtedly find useful applications, particularly where the process can be combined with other processes or with existing facilities. The production of natural gasoline and the manufacture of chemicals afford opportunities for such combinations. However, without the economic advantages of such combinations, the available information indicates that as a means of producing gasoline alone the Fischer-Tropsch process would not be competitive with present refinery operations, using crude oil as a raw material, under present prices. Moreover, the peak gasoline production from natural gas by the Fischer-Tropsch process will undoubtedly amount to only a minor proportion of the total gasoline supply of the nation. Our appraisal of the commercial possibilities of converting natural gas to liquid fuels on the basis of our own research and results reported by others, leads us to be more optimistic than is warranted by any conclusive published data.

The intense interest during recent years by several oil companies promises to crystallize in the near future the commercial development possibilities of the Fischer-Tropsch process for conversion of natural gas in this country. The success of this development would bring

TABLE III

POTENTIAL GASOLINE PRODUCTION FROM CRUDE OIL, NATURAL GAS AND COAL RESERVES

	Proven Reserves [1]	*Estimated Gasoline Production (billion bbl.)*	*Years of Gasoline Supply At 1940 Rate of Consumption* [2]
Crude Oil	20 billion bbl.	10.0 [3]	18
Natural Gas	140 trillion cu. ft.	11.7 [4]	21
Coal:			
Most Suited for Fischer-Tropsch Process	1.4 trillion tons	2,100.0 [4]	3750
All Grades	3.2 trillion tons	2,100.0 [4]	3750

[1] Data from Table IV.
[2] Assuming that the rate of gasoline consumption remains constant, unaffected by increased efficiencies, and assuming that the efficiencies of conversion of crude oil and natural gas to motor fuel is unchanged.
[3] Assume 50% gasoline yield.
[4] By Fischer-Tropsch Process.

TABLE IV

PROVEN RESERVES OF NATURAL GAS, CRUDE OIL AND COAL AS OF JANUARY 1, 1945

	Weight (Thousands of Short Tons)	Heat Value (Trillions of B.t.u.)	Volumes (Trillions cu. ft.)	Volumes (Millions of Barrels)
Natural Gas [1]	3,384,500	150,000	140	—
Crude Petroleum [2]	3,135,000	123,000	—	20,453
Coal (Suitable for Fischer-Tropsch) [3]	1,400,000,000	36,400,000		
Coal (all grades) [4]	3,178,000,000	66,534,000		

[1] Reference (2) Assume 1075 B.t.u. per cu. ft. and 48.35 lb. per M cu. ft.
[2] Reference (1) Assume 6,000,000 B.t.u. per barrel and 7.3 lb. per gallon.
[3] From Table III.
[4] As of Jan. 1, 1942 Reference (7). Corrected to an equivalent amount of coal (2,559,000,000,000 tons) with a heating value of 13,000 B.t.u./lb. (7).

new problems of integrating it with the natural gasoline industry, with which it is complementary in that it affords an outlet for residue gas and for dry gas without a pipeline market, and with the natural gas fuel industry with which it promises to compete for that gas. Furthermore, the Fischer-Tropsch process has a very promising limited application to the synthesis of raw materials for synthetic lubricants, detergents, edible fats, solvents, aldehydes, alcohols, acids, etc., as practiced in Germany during the recent war.

From the standpoint of conservation, it should be pointed out that the larger heat loss inherent in the Fischer-Tropsch process of producing motor fuel is avoided by the direct use of natural gas as automotive fuel. Such use has received considerable attention in various foreign countries where liquid fuel supplies were inadequate. The high pressure gas lines passing through the most densely populated areas of the United States afford a means of solving part of the economic handicap for the usage of natural gas as direct motor fuel. However, automotive vehicles using natural gas as a direct motor fuel require considerable investment in tanks and fuel feed systems, as well as in other additional facilities. Furthermore, motor-driven vehicles are not often confined to local services in restricted areas but depend upon widespread availability of fuel. For these reasons, one can expect that the use of natural gas as a direct motor fuel will not be extensive.

Fuel Reserves

In the preceding discussions we have assumed adequate reserves of natural gas. We will now give this subject of reserves further consideration. Figure 4 gives the estimated gas reserves in the United States from January 1, 1919, to January 1, 1945, inclusive. As seen in Figure 5, Louisiana, Texas, Oklahoma and Kansas are credited with some 83 per cent of these reserves. The proven reserves of natural gas, petroleum and coal as of January 1, 1945, are presented in Table IV[1, 2, 6, 7] in terms of volumes, weights, and also on a thermal basis.

Such reserve figures, it should be pointed out, do not take into account the effect of future advances in the science of exploration and the advantages to be gained through deeper drilling, nor to the possible opening up of new areas which will undoubtedly occur whenever the demand for new supplies becomes evident. The repeated forecasts made over the past 20 or 30 years indicating the early exhaustion of petroleum and natural gas deposits and the actual reserve history over this period are a good indication of how inaccurate such forecasts can be. In each instance, the new exploration activities, which resulted from a persistently increasing demand, effected an increase in the proven reserves which are now greater than at any time in the history of the industry. The fact that such additional reserves could be found while the industry was engaged in supplying a peak demand for gas and oil during the past world war period should give us some assurance that adequate supplies will be available for all of our needs for many years to come.

Gas Parallels Oil Supply

If natural gas were used at the estimated 1944 rate of consumption our proven gas reserves would last a little over 35 years. Yet we know that a large amount of the gas used was sold at very low prices only because there was no higher price market available. Therefore, we can state quite assuredly that as higher price markets for natural gas are developed, or greater value is placed on this material, the low price markets such as carbon black, natural gas for power, and low price industrial uses will disappear. Such being the case, I am firmly of the opinion that our natural gas resources will not be exhausted prior to those of crude oil.

We do not know what may be the distant future quality of fuels and lubricants for the internal combustion engine. Carbon and hydrogen regardless of source are potential raw materials. We should continue to adequately investigate all sources, including agricultural products and coal. Some of the results of the large amount of research now being conducted by the petroleum industry will in future years find useful application in the conversion of coal and agricultural products to fuels and lubricants. Therefore, the research on petroleum and natural gas is supplementing and complementing the research financed by the Government on agricultural products and coal. This latter research *(Continued on page 48)*

Ad-vice

by P. K. THOMAJAN

● The art of originality in copy is one of . . . . Pepitition.

The aim is to get the common touch in an uncommon way.

Words that really *talk* are those that sing.

Many a blue-ribbon job just narrowly escapes being strangled by red-tape.

Over-emphasis makes statements appear wallop-sided.

Two things every firm should zealously avoid: Badvertising and Dublicity.

—*Printers' Ink*

"A GAS Flame cooks quicker, I always say!"
"Believe me, GAS Flame broiling seals meat juices in!"
98%* of Chicago's Homemakers
COOK WITH A GAS FLAME
. . . that's why there's a rush on for new GAS Ranges!
New Gas Ranges are now available
The Wonder Flame that Heats on Cools
THE PEOPLES GAS LIGHT AND COKE COMPANY

Three striking advertisements in the powerful "gas flame" series being published currently by The Peoples Gas Light and Coke Co. in Chicago newspapers. Clayton G. Cassidy, advertising manager, is a consultant to the A. G. A. Subcommittee on Approval of Domestic Gas Copy

A Note to Designers of Kitchen Stoves*

THE advertising pages of the magazines, full of bright visions of things to come, show us that industrial designers are on the job again, and that they are taking over their sector of the postwar front with more vigor and assurance than most governments are showing.

Streamlining was a chief feature of industrial design before the war, and pictures of the "brave new world" promised us by manufacturers lead us to expect more streamlining ahead. This gives us some uneasiness, for though the streamlining of airplanes, railroad trains, ships, automobiles and women improves their looks and tends to make them faster, we cannot see why wind-resistance should be considered in the design of furniture, radios, heating plants, refrigerators and kitchen stoves.

Beautiful Stove

As it happens, kitchen stoves have been much on our mind of late, and we think some of our ideas about them may be worth reporting.

Our own kitchen stove looks like most others. Our grandmother would never have recognized it for a stove. It is of white enamel with rounded corners, stainless steel trimmings, and a folding top that is almost never closed. It is compact, easy to clean, and looks ecclesiastical. With the top closed and a vase of calla lilies on it, it could serve as a modernistic altar in a Hollywood wedding scene. But that is not what we want of a kitchen stove. We are not contemplating marriage, having long ago effected a matrimonial arrangement we have no desire to change.

What we want of a kitchen stove is that it shall be a first-rate instrument for the production of well-cooked food, and the fact is that neither our own nor any other modern domestic kitchen stove we have tried, whether gas or electric, is a better cooking instrument than was our grandmother's coal range of fifty and more years ago. Indeed we believe that the shift from wood and coal to gas or electricity was, if anything, unfavorable in its effect on cookery. The improvement it brought was in convenience. It is pleasant to have done with coal and ashes, to turn a button and get full heat quickly instead of waiting for the fire to start, and not to have the kitchen overheated as it used to be in coal stove days. Also the modern stove is pretty enough for Salvatore Dali to fry a watch on. But these things are not enough.

For Better Performance

Progress consists in taking what we have and making it better. We hope there will be no further efforts to beautify kitchen stoves, but that experts in engineering and cookery will collaborate to improve stove performance. Here are some things we believe they ought to think about:

Better insulation, to make ovens hold their heat.

Even distribution of oven heat for roasting and baking, making it unnecessary to open the oven door and change the position of what is being cooked, to prevent its burning in one place and being insufficiently cooked in another.

There is need of a device for keeping food that is cooked and ready, hot, but without cooking it further. On the old-fashioned coal range this could be done by pushing it to the back of the stove. Now we use the oven for this purpose, which tends to dry the food, or else place the pot over a heating unit, turned low, which tends to keep it cooking and often spot-burns it.

A warming closet, such as coal stoves had, is another thing we miss. Dishes could be made ready for use in the warming closet, bread could be left there overnight to rise, and it had many other uses.

The man who sold us our present beauteous stove said there was no need to build a flue to get rid of oven fumes. That was all taken care of, he said, by modern stove design. The deuce it was! We can't keep our kitchen walls from looking brown and greasy. If stove people persist in saying flues aren't needed they ought to make the statement good by improved engineering. Why shouldn't a stove be equipped with a large removable cartridge of absorbent material that will catch greasy oven fumes the way the cartridge in a Morrell Mackenzie pipe, or the extra cigarette in a Zeus cigarette holder, catches the muck?

While we are talking of kitchen stove improvements, how about an automatic revolving spit?

We have never seen a gas or electric stove that will broil as well as a fire of coal, wood or charcoal. Accomplished chefs say the best broiling is done with heat that comes from below. To plan a modern gas or electric stove so that heat for broiling would come from below would require ingenuity.

ED. NOTE—Many of the above suggestions have been and are an important part of the research conducted by the Manufacturers and the A. G. A.

* Reprinted from "Table Topics" published by Bellows & Co., Inc., New York, N. Y.

Get a Load of This!

The following article is a somewhat condensed version of a presentation made by Mr. Rohde and others at the series of regional planning meetings held in 31 cities in this country and Canada from September to December inclusive under the sponsorship of the Residential Gas Section of the American Gas Association. It is not entirely the work of the author and acknowledgement is made of the assistance of C. S. Stockpole, Chairman of the A. G. A. Water Heating Committee, William J. Schmidt, Long Island Lighting Co., and M. M. Scott, Ruud Manufacturing Company. Mr. Scott contributed the entire writeup of the "Ten to One" Plan.

BY G. M. ROHDE, JR.

Ruud Manufacturing Co., Pittsburgh, Pa.

IF you can get one gas water heater customer to keep one hot water faucet open one minute longer, you will increase your gas load by 3570 B.t.u. each and every time that you cause this to happen. Let's sell the increased use of hot water—to keep those faucets open *one* more minute a day, 2 more minutes, 5 to 10 more minutes! One more minute equals 3570 B.t.u. and 10 minutes more means 35,700 more B.t.u.'s. Multiply it by a hundred water heaters—a thousand water heaters—and you'll be running into some very interesting load-building figures.

This gas water heating load-building program divides itself into three classes:

1. Your Faucets:

These are the faucets that are already connected to automatic gas water heaters now in use. That's an immediate group to work on. According to "Gas Appliance Merchandising," August, 1945, there are 6,585,000 automatic gas water heaters in use today. Getting this group to keep their hot water faucets open *one minute longer* or more each day represents real load-building possibilities.

2. The Other Guy's Faucets:

These represent the group along the gas mains using non-automatic type water heaters such as coal, oil, etc. This is a large group and represents even greater load-building opportunities than Group No. 1. There are 13,415,000 homes in Class No. 2 and it is from this group that most retail sales of automatic gas water heaters will be made. This should be our first line of attack.

3. New Home Faucets:

Here is the new home market. According to the Market Research Department of "Architectural Forum," one million homes per year will be built for the next ten years.

These three markets, together with the large volume of remodeling and replacement, make big opportunities for increasing the gas load by selling automatic gas water heating service.

New financing will give automatic gas water heaters a break.

A new trend in financing is sweeping the country and it will affect the gas water heating load favorably. This trend will extend itself into the remodeling field and will be a big aid in breaking down the resistance to gas water heater sales.

To best show how this new financing plan works, let me illustrate.

To purchase a $4,500 home required a monthly payment of $35 on the part of the owner. If he desired to purchase a good range, refrigerator and automatic

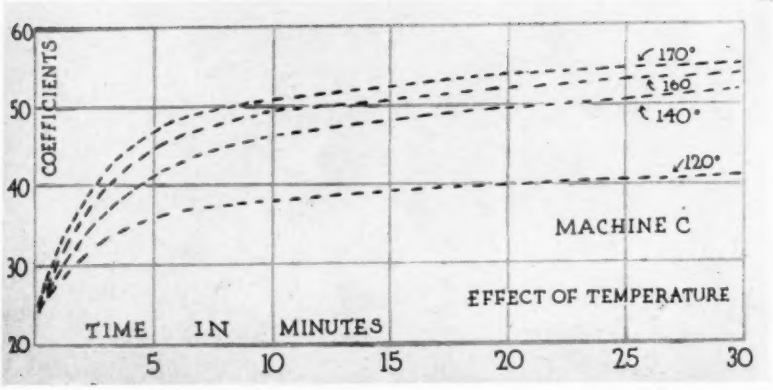


Chart taken from Virginia Polytechnic Institute's report which shows that "the hotter the water, the whiter the wash"

laundry machine, which retailed at $455 (1940 price) the best terms available on a thirty-month basis were $15.80 per month. In other words, to buy a $4,500 home with these appliances this owner, would have to lay out $35 plus $15.80, or $50.80 monthly and, therefore, the builder and owner short-changed the water heater because there just wasn't enough money to go around. On the postwar basis of financing all this equipment with the home, the monthly payment would only be $37.32, representing a $13.48 saving for a better automatic gas water heater. This enables the builder to stress the operating company and quality of the equipment. "Architectural Forum" says "Its cost of operation will have to be predictable."

Get-A-Load of This

The design of the postwar home will demand MORE hot water in more ways than one and this will mean many more hot water faucets kept open many more minutes per day. For instance, here is what "Pathfinder Magazine" says about the bathroom in postwar homes:

The Bathroom Comes of Age

"The first World War started the kitchen on a new career as a modern and efficient workroom. The second World War will start the bathroom on a new career. Without the shadow of a doubt, the bathroom will become the most dramatically improved room in the house." "Keep in touch with bathroom developments; they'll strike closer to home than perhaps you imagine."

GI's laying in cold wet fox-holes appreciate more than anyone the value of a real hot bath and they will want their homes to have plenty of them. More bathrooms per home, powder rooms, showers, mean more hot water faucets and they'll be open many minutes per day and this means we'll all "Get a Load of This." In addition to this, our load will be increased by electric appliances that demand a hot water of a *definite quantity* and *temperature* to operate them at their top efficiency, just like they demand the right voltage to operate their electric motors. "Tough requirement for anything but an automatic gas water heater," but gas can take this load because speed is the inherent characteristic of gas. These requirements make the coal, oil and other non-automatic heaters scream for help. What are these appliances? The automatic electric dishwasher and the automatic electric laundry machine.

Water Heating Bottleneck

Bendix, Westinghouse and a raft of other companies plan to build automatic laundry machines. We have heard estimates from a million to four million of these machines being sold per year. We do know that millions of dollars will be spent advertising and promoting this device.

This whole tremendous market is going to get all jammed up into one bottleneck unless we install adequate capacity automatic gas water heaters. As the sales of electric appliances are being stopped until adequate wiring is provided, so will these appliances sales be handicapped by inadequate water heating equipment. You can help break this bottleneck by knowing all the facts about the hot water requirements of these machines and then size and install the correct automatic gas water heating system.

The public clamor for this machine and the lack of information on correct water temperature for washing clothes has caused two outstanding colleges in the country to undertake studies on the subject of washing. Virginia Polytechnic Institute has just completed its project and Pennsylvania State College, under the direction of Dr. Pauline Berry Mack, is conducting the most comprehensive study of washing ever undertaken. Pennsylvania State has been working with commercial laundry associations and is well qualified to run a study of this kind.

Why should a gas company get excited about an electric automatic laundry machine and automatic electric dishwasher? I'll tell you why; it keeps the hot water faucet open one minute longer and then some, the gas company gets five times as much revenue because of these appliances as the electric companies who will spend millions of dollars promoting and advertising them. Five for one for merely cooperating "ain't" a bad deal anytime. W. Schmidt, sales manager of Long Island Lighting Company, in a recent article in the American Gas Association MONTHLY (November 1944) speaking of dishwashers, said, "This appliance needs an adequate supply of 'really' hot water and like the automatic electric clothes washer the revenue derived by the gas company for supplying the required amounts of hot water, far exceeds the return realized by the electric utility —(approximately 5 to 1 in each case)!"

Speaking of laundering of cottons and linens, such as bed sheets, pillow cases,

white shirts, work shirts, towels, handkerchiefs, or in other words, the bulk of the wash, Virginia Polytechnic Institute's report shows that regardless of the type or make of machine tested, "the hotter the water, the whiter the wash." This may startle some of you but, of course, we're not talking about the dainties washed in the bathroom. Many washer people will be out, as well as soap people, saying that their machine or soap saves hot water. You can't save hot water unless you're willing to sacrifice cleanliness.

Some automatic machines have the advantage of being able to use hot enough water to simulate commercial laundry procedures and in so doing, according to Pennsylvania State College Bulletin No. 4, make the clothes free from pathogenic bacteria. Soapy water of 110° and 120° according to this bulletin, does not accomplish this.

Conventional type washer manufacturers advertise the fact that you can use the water over and over again, whereas a sanitary feature of the automatic machine is that fresh, clean, hot water is used with each batch of clothes. Many clothes dried by centrifugal force in the automatic laundry machine, need not be ironed. A recent survey shows that 47% of the homes surveyed in western Pennsylvania boiled their clothes before placing them in the conventional washer.

Hot Water Saving Costly

So-called saving of hot water is expensive according to the following results taken from Virginia Polytechnic Institute.

Increasing the water temperature alone 40° *extra* produced 25% *extra* whiteness for less than 1.4¢ extra for gas.

Leaving the water temperature alone at 120°, but adding 50 grams of extra soap (F-5) gave 25% extra whiteness for 3.2¢ extra cost of soap. Gas cost less than half to accomplish what the soap did.

When you sell them extra hot water *you* get a *load*. When they substitute extra soap for hot water, *soap* companies get the *load*.

Let's keep selling the theme song "the hotter the water, the whiter the wash."

Here are some facts about the automatic laundry machine:

1. Cycle can be from 21 minutes to 47 minutes.
2. Cycle uses 15 gallons of hot water.
3. Three loads can be washed in 1 hr. 6 min., using 45 gal. of 160° F. water.
4. Temperature settings are as follows:
   A. Cool—60-85° F.
   B. Colors—105-115° F.
   C. Silks—115-125° F.
   D. Cotton—135-145° F.
   E. Hot—155-165° F.
5. 7 and 9 lbs. of clothes per load (average family 21 lbs. per week).
6. Temperature drop in machine:
   15° F. on dry load
   30° F. on pre-soaked loads
   12° drop in conventional washer (119)
   31° drop in conventional washer (185)
7. Cold water slugs due to piping (Purdue University Study) 25% heat loss.
   37′ of ¾″ pipe requires 7¾ qts. of cold water drained off before hot water is available (Copper & Brass Research).

To show how much a part hot water plays in the success of the automatic laundry machine, let me quote from a recent survey made by a large Eastern electric company on the users of automatic laundry machines in its territory. This large electric company has 5,232 automatic washers on its lines. 88% of these automatic washers have been in use at least 3 years. Twenty-two different water companies serve different sections of the company's territory and each has a different water analysis. One water company has an average hardness of 304 P.P.M. (parts per million), which is extremely hard, whereas another has water that contains as little as 45 P.P.M., which is less than 3 grains of hardness.

You might be interested to know that 45.8% of these laundry machine users had instantaneous gas water heaters; 35.3% of them had automatic gas storage water heaters and 18.9% had side-arm gas water heaters.

Now here are some results of that survey:

"The most significant fact brought out by these averages is that in one-half of the loads, the starting temperature of hot water was below 140 degrees. Compare this with the fact that 62.5% of the dial settings called for a water temperature of 140 degrees or more in the automatic washer.

"In comparing the 'starting' water temperatures of these loads with the average of all loads, we discover a significant difference. Definitely lower temperatures existed throughout the unsatisfactory loads."

Now to correct the trouble the homeowners in 6.3% installed new automatic gas water heaters

4.2% set up thermostat
2.2% made repairs and adjustment
4% waited longer between loads
3.6% washed on different days
2.2% turned up the gas
3.2% pre-boiled the clothes

"Opinions of Housewives"

In homes where very hot water was found (over 150 degrees), the housewife was questioned.

"In 24% of the homes covered, temperatures over 150 degrees were found. (3% had temperatures 170 degrees and up.)

"In over 80% of these cases, housewives were not perturbed, nor were they

aware of any particular difficulty experienced by other members of the family with the hot water. About 12% recalled that they had to be careful when they first used the heater.

"The remaining 8% included a few who wanted the water temperature definitely reduced because they, or other members of the family, did not like it. However, in this group, it seemed mainly a matter of comfort rather than fear."

"Lapse of Time Between Loads"

"The hot water supply is affected by repeated and speedy succession of washes. The more quickly one load follows another, the higher must be the recovery rate of the water heating equipment.

"Details for the time between the first and second loads, are as follows: 40.3% of the second load was started in fifteen minutes, or less, after the first load.

"In half the loads reported in this

study, the recovery rate appears to be inadequate. In fact, the low hot water temperatures that prevail by the end of the wash period in half of these loads (125 degrees and down), shows that the hot water supply is generally not hot enough *to meet the known requirements of the automatic machine.*

"Paradoxically as it may seem, this survey indicates that ordinary water heating equipment will serve, if the customer is willing to sacrifice speed and convenience and wait a sufficient length of time to obtain high water temperatures.

"General Recommendations"

1. "Salesmen who sell water heaters can render a better service to customers if they recommend new heaters of sufficient capacity to take care of the demands of automatic washers, as has been indicated in this study.

2. "Architects' and builders' codes should specify large enough water heater capacity to take care of the hot water demands of automatic washing machines. Specifications based upon average demands are important for proper utilization of automatic washing machines."

And don't forget the automatic dishwasher as a load-builder!

We have placed a lot of emphasis on the laundry machine, but the automatic electric dishwasher has a similar story. Many prefabricated builders will make the automatic laundry machine and automatic dishwasher a standard part of *their* homes. The value of automatic dishwashers, with the right temperature water, from a health standpoint, was shown in this war. In World War I, faulty dishwashing caused widespread outbreaks of disease. This war they profited by that experience and as a result no outbreaks were reported where they had adequate hot water of the correct temperature to wash dishes according to army regulations. The army had to clean up restaurants adjacent to army camps in order to prevent civilians from infecting the camp. The automatic dishwasher is one appliance that falls flat on its face on performance when the water temperature goes down.

"Ten to One" Water Heaters Sales Plan

WE'VE seen all these opportunities and have all these facts—now how can we keep these faucets open a lot more minutes per day?

Well, nobody can tell all of you exactly what to do to capture these hot water faucets and keep them busy. Conditions vary from section to section, even from city to city.

New England's sales plan might easily fail in California and California's might be a colossal flop in Florida.

Let me point out, then, that each gas company must work out its own individual plan that will deal with its own individual needs and conditions.

I'm going to present one plan for your consideration. I hope you like it and if you do like it, that you'll use it.

It's called *ten* to *one*, and it's very, very simple, for it's really only a skeleton or a framework, which will help you to create your own plan easier and in a highly organized way.

The *one* in this particular prescription is Mr. Prospect, the object of every sales program, advertising campaign, promotional activity and every sales interview.

Every sales program has *one* main object—to sell *a* water heater to *a* prospect.

If you can set up a program that will sell *a* water heater to *a* prospect you'll find that the same program will sell *lots* of water heaters to *lots* of prospects. So, please visualize a prospect and always remember most of them are plenty tough—even the Marines aren't tougher. This prospect, like all prospects, thinks a lot of his money and doesn't want to part with it—*and* if he is thinking of spending some of it, the chances are he is thinking of a new automobile or new furniture, and *not* of an automatic water heater. Keep your mind on *one* prospect. Mr. Prospect is the *one* in *ten* to *one*. The *ten* are the ten agencies that practically every gas company has at its command and which can be joined together to carry out a single idea—to sell *this* prospect an automatic gas water heater.

Ten to *one* is a good bet on almost anything;—here it's practically a sure thing and you can't lose. Mr. Prospect has his own personal theme song, "Don't fence me in," but he's going to be all wet about that idea, once we put our hot water to work—and that's going to be *right now*.

We're going to fence in this gentleman with ten pieces of fence and, if we build our fence properly and have all sections in it—none missing—our fence will really be hog-tight. Mr. Prospect will be really fenced and the proud owner of an automatic gas water heater.

Let me say again that this is a simple vizualization designed to show you that you *do* have or *can* have, ten selling agencies that you can organize to sell *this* prospect, that if one of these sections is left out then you have left an escape route for Mr. Prospect—that if you have, for instance, only five sections of fence in place, that the chances are fifty-fifty that Mr. Prospect will get away from you.

To set up an air-tight sales program, have a *ten*-section fence. If you do, the sale is made.

Section No. 1 of this *ten* to *one* fence is *The Utility Executive.* That's another name for the *big boss.*

Management must support the program in an enthusiastic way; it must be active in your program.

What can the big boss do to help you? Here it is.

1. THE UTILITY EXECUTIVE

Get Religion
Overall Plan
Personal Use
Money
Participate

First and foremost of all, the boss has got to get religion—the old-time revival sort of religion. He has really got to be sold on the automatic water heater and what it will do for his customers and what it will do for his company. He's got to see those 3570 B.t.u. that will drop into his cash register if the hot water faucet is kept busy *one minute longer.*

He's the man that has to approve the overall plan—the prices, maybe, the terms and the inducements. The boss should express his belief in the appliance as a tool of better living by using it in his own home. He most certainly should see that the water heater program should have the money it requires to operate successfully—and I know that you'll agree that is a most important function.

And, finally, he should participate in the program—sign letters to salesmen and employees indorsing the program; speak at meetings, and otherwise let it be unmistakeably known that he is personally interested in this program.

Section No. 2 in our fence—*The Manufacturer.*

Tie up with water heater manufacturers that can really help you—those that are organized to help you. Here are a few important things to look for in a manufacturer.

2. THE MANUFACTURER

Record
Public Acceptance
Product
Sales Help

Check his record—what other gas companies think. Check for public acceptance of his product. Is it well-known? Is it favorably known? Check the product itself. Remember that many a customer will form his opinion of gas as a fuel by the perform-

(Continued on page 35)

Live Blue Flame For Displays

Unique combination of light and motion makes industry's symbol a dynamic, vitalized medium of sales promotion

BY D. W. FRYE

Equitable Gas Company, Pittsburgh, Pa.

THE gas industry's blue flame symbol needs snapping up. Paint alone can't do it, no matter how many imaginary cones are painted into it, or how much display lighting is used.

Everyone has noticed that a spinning silver coin takes on the appearance of a transparent ball. That optical illusion can give the gas industry a display flame brought to life—a vitalized, moving thing that has all the appearance of a real flame, yet retaining its idealized form. You do it with quick rotation and lights.

The well-known idealistic flame shape is cut out of sheet iron of a gage sufficiently heavy to give rigidity, mounted on a vertical shaft and rotated by electric motor.

For color, two shades of blue are suggested; two bands of light blue and two of medium blue, one of the latter being the center cone, to represent the inner cone. Since the flame is glamorized anyway, close adherence to the true proportion and number of cones is not necessary, but may be adjusted to suit the fancy of the display designer.

Flat color is desirable in order to prevent glare or flashing reflections of the display lighting.

Best appearance is obtained by displaying the flame in a recess in the display panel, and viewed centered in a circle or other conventional shape of opening. The inside surface of the recess should be painted flat black to avoid distracting reflections and to show off the flame in greatest contrast.

Lights may be hidden at the sides of the recess, but are best located below the flame and to the sides to further reduce the possibility of light reflection.

If the display flame is to be used in a floor display or otherwise within reach of inquisitive fingers, it is advisable to enclose the recess in glass. Otherwise, if no damage suit results, your display flame may be bent or damaged. Human beings will investigate.

The animated flame display in the picture was designed for store or office floor use, particularly for display of small New Freedom Gas Kitchen models, with provision for changing models and poster as needed. Space for "take one" literature is also provided

A. G. A. Committee on Natural Gas Reserves To Prepare National Estimates

N. C. McGowen

AUTHORITATIVE and dependable estimates of natural gas reserves in each of the five gas producing regions of the country, as well as for the entire nation will be available to the gas industry, to utility analysts, to investors and to the consuming public, N. C. McGowen, president of United Gas Pipe Line Company, Shreveport, La., and chairman of the A. G. A. Committee on Natural Gas Reserves, announced after the organization meeting of his committee.

Regional committees will be appointed by chairmen designated by Mr. McGowen to compile accurate estimates of natural gas reserves for the five territories, which will correspond to the Districts of the Petroleum Administration for War. These regional committees, headed by members of the A. G. A. Committee on Natural Gas Reserves, will be made up of outstanding experts in geological and natural gas circles.

Ernest E. Roth geologist, United Fuel Gas Company, Charleston, West Virginia, will form the subcommittee for Region No. 1, comprising Kentucky, New York, Ohio, Pennsylvania, Tennessee, Virginia and West Virginia.

Charles O. Hoffman, superintendent, Land Lease and Geological Dept., Cities Service Gas Company, Oklahoma City, Okla., will head District No. 2, including Illinois, Indiana, Kansas, Michigan, Missouri, North Dakota, Oklahoma and South Dakota.

R. O. Garrett, Arkansas Louisiana Gas Company, Shreveport, La., Perry Olcott, Humble Oil & Refining Company, Houston, Tex., and Paul C. White, vice-president, South West Gas Producing Company, New York City, will form the subcommittee for District No. 3, covering Arkansas, Florida, Louisiana, Mississippi, New Mexico and Texas.

W. T. Nightingale, vice-president, Mountain Fuel Supply Company, Rock Springs, Wyoming, will appoint the subcommittee for District No. 4, comprised of Colorado, Montana, Utah, and Wyoming, and Roy M. Bauer, gas supply supervisor, Southern California Gas Company, Los Angeles, will form a subcommittee for California, which comprises District No. 5.

The regional subchairmen will report estimates to Mr. McGowen and to Lyon F. Terry, vice-president, The Chase National Bank, New York City, who is vice-chairman of the Committee on Natural Gas Reserves.

The committee hopes to have its first report on natural gas reserves ready for presentation at the annual meeting of the Association in Atlantic City in October 1946. Subsequent annual reports will be prepared, if possible, for release in conjunction with the annual Spring Meetings of the Natural Gas Department.

"Well, we lived through the first World War and now the second is all over, but we've still got the same old range and icebox—it makes me wonder sometimes what we were fighting for!"

Courtesy New York World-Telegram

The Modern World—Phooey!

Mrs. W. R. Plum
1733—20th St.
Washington, D. C.
November 16, 1945

Saturday Evening Post
Philadelphia
Pennsylvania

Dear Sirs:

Why don't you take a poll of your readers who do their own cooking to find out what sort of stove they prefer? In these days of curious trade combinations it may be that the stove manufacturers have teamed up with the American Medical Association to promote sacroilliac troubles and blindness or with the restaurant owners in a plot to end home cooking. If, however, the stove manufacturers actually believe that cooks prefer to lie on their stomachs to broil steaks while sizzling fat pops into their eyes or that the constant bending and stooping required by the modern ovens is desired for their figure's sake a poll might show them how very wrong they are.

Of course, actually they do know better. Clerks who sell stoves all admit that most of their customers do plead for the wonderful old-fashioned stoves where one could do one's cooking standing up but insist that the manufacturers will not make them.

Six years ago the owners of my apartment building switched stoves on us. I went home to find my lovely old-fashioned stove gone and a horrible encased modern thing in its place. I simply refused to pay any rent until they found my old stove for me and gave it back. I am middle-aged and do not intend to speed rheumatic or sacroilliac pains by unnecessary acrobatics. Three other women who were home when the stoves arrived refused to permit the substitution and all of us plan to take the old ones with us wherever we move—at any price. Not one—and I have made a survey—of the pretty little tin tops which concealed the burners remain in the apartments. Every single housewife put up with those unbelievably inconvenient articles for a short time and then told the janitor to throw them out. Would you want to keep raising and lowering a four-foot lid every time you boiled a cup of water? Also, most of us have shelves over the stove—there is far too little shelf space in most apartments anyway—and it wasn't just a case of lifting the miserable things; we had to take them off and find a place to put them every time we made a cup of coffee.

Of course your poll would probably turn out as the automobile manufacturers poll of motorists' preference did. "What" they nobly asked "do you most want in the new automobiles?" Every list was headed by "more window space." Have you sat in the back seat of any of the new cars and tried to see the country beside you?

The modern world—phooey! I'll take the comfortable, convenient, old fashioned one, please.

Truly yours,

Mary Plum

(Surveys show conclusively that women prefer (1) beauty, (2) convenience.—EDITOR)

A.G.A. Residential Gas Section carries all-gas merchandising plans to utilities in 31 cities

EARLY in the spring of 1945, the Residential Gas Section of the American Gas Association sponsored a series of meetings in ten major cities in various parts of the country for the purpose of bringing direct to the gas industry a number of important programs, including Salesmen Selection, Indoctrination and Sales Training, and the New Freedom Gas Kitchen.

The Section's traveling troupe, consisting of the secretary and representative members of gas utility companies and gas appliance manufacturers, have completed the last group of a second series of Regional Planning meetings held in 31 cities in the United States and Canada.

These meetings were held for the purpose of affording gas utility companies and dealers an opportunity to review plans formulated by the Section, designed to assist the gas industry in organizing their postwar sales and promotional activities. The first meeting was held in Montreal, Canada, on September 12 with the final meeting on December 17 at Rochester, New York. They have been conducted under the chairmanship of some of the gas industry's most widely known executives and have been attended by more than 3000 utility company executives, salesmen, gas appliance manufacturers and dealers.

The meetings featured the presentation of the "All-Gas Merchandising Program" sponsored by the Surface Combustion Corp. of Toledo, Ohio, which is a complete coordinated program specifically designed to assist the gas utility company to assume sales leadership in its community. It focuses on the promotion of all of the major residential uses of gas to facilitate the sale of "all-gas" service for the home.

New Home Market Is Target

The program is organized to capitalize on the tremendous market which exists in the new home field through the setting up of a Home Planning Bureau through which information and assistance on new home planning and the modernizing of existing homes will be furnished to the local consumer.

Included among the program's objectives is that of stimulating interest in new home building and modernization and of selling the new home builder or modernizer on the merits and desirability of the all-gas home, to encourage closer cooperation of local architects, builders and other factors in the home building field by giving them information to better serve their clients through the proper appreciation of gas service and equipment and to assist local dealers in promoting the all-gas home.

The program was presented to the gas industry by top-flight executives of the Surface Combustion Corp., including Frank H. Adams, president, W. J. Grover, marketing director, H. C. Gurney, western sales manager, E. A. Weaver, sales manager of the Space Heating Division, Robin A. Bell, Ralph C. Caylor and George P. Mandel, regional representatives, and others.

Another important feature of the meetings which attracted considerable interest and attention, entitled "Another Key to the New Home Market," was presented by H. P. Morehouse, general heating and air conditioning representative of the Public Service Electric and Gas Company, Newark, New Jersey. Mr. Morehouse is chairman of the Subcommittee on Publicity and Specifications of the Committee on Housing of the Residential Gas Section, in charge of preparing the important Reference Manual of Modern Gas Service. He gave a complete and comprehensive preview of the manual which has been prepared to be placed in the hands of the men who will design, build, and finance new homes in which the American public will live.

The manual is a complete handbook containing the latest information on the installation of modern gas service in new homes.

He pointed out that the manual includes concise and authentic data on sizing, specifying and installing of all do-

First regional meeting in the A.G.A. Residential Gas promotional program was held at the Mount Roy Hotel, Montreal, Canada, on Septem 14. It was the opening gun in a program which reached 31 citi in three months.

N.B. Bentolette, president of the Hartford Gas Co., opens the Hartford meeting.

The St. Louis conference at the Hotel Statler packed them in.

Gas company officials at the St. Lou session. Seated- F.H. Rosenkrans, Kansas City Gas Co., and R.H. Vandag Laclede Gas Light Co., who presided. Standing - W.L. Jones, St. Louis Coun Gas Co.; Don P. Warner, Gas Servic Wichita; and F.L. Early, St. Louis County Gas Company.

mestic gas appliances and in addition, includes typical architects installation specification sheets and manufacturers' appliance data sheets. He advised that the manual would be available to the gas industry in February of 1946 and urged his listeners to take advantage of this important tool, which has been prepared after more than two years of effort by representative members of the industry at a cost of nearly $70,000.00.

In discussing the "CP" program "Dreams for Sale," James I. Gorton, "CP" promotional director of the Association of Gas Appliance and Equipment Manufacturers, and the speakers who substituted for him in various parts of the country, told utility executives and dealers in attendance at the meetings that gas ranges built to "CP" standards present gas utility companies with an unusual opportunity to replace the obsolete gas ranges on their lines and dealers with the greatest merchandising opportunity in major appliance history.

"CP" Selling Tools

It was pointed out that two out of three homes in the United States and Canada have ranges more than eight years old and that the consumer judges gas as a cooking fuel by this antiquated equipment in their kitchens. These speakers stressed the fact that gas ranges built to "CP" standards offer salesmen two selling tools and the consumer with two outstanding buying guides. These two advantages are: first, the brand name of an outstanding manufacturer plus the "CP" trademark. Ranges built to "CP" requirements, the speakers continued, will have every single feature women have asked for in postwar ranges, in addition to other modern features. The "CP" dealer promotional kit was presented at the meetings and utility company executives were urged to make this material available to the local dealer.

In addition to Mr. Gorton, who was present at the majority of the meetings, the program was presented by George W. Wells, sales manager, Gas Service Co., Topeka, Kansas; E. B. Voneman, sales manager, Montana Dakota Utilities Co., Minneapolis; C. W. Steele, Portland Gas and Coke Co., Portland, Oregon; W. M. Jacobs, Southern California Gas Co., Los Angeles, Calif., and J. R. Guidroz, New Orleans Public Service Co., New Orleans.

At Milwaukee, Wisconsin, about 75 gas men heard details of the industry's merchandising plans.

...while Minneapolis turned out an attendance of approximately 100.

Seattle, Washington, gas executives in large numbers paid close attention to the cooperative sales presentation.

R. J. Barnett, (left) Portland Gas vice-president, presiding chairman, with other Oregon meeting headliners.

An all-gas crowd at Denver, Colorado. Shown are Y. B. Buck, F. W. Williams, J. E. Loiseau, H. P. Morehouse, Y. D. Wells, E. O. Olsen, E. W. Cone, Y. M. Musick, R. A. Caylor, R. J. Monrad.

This Dallas meeting the end of October shows how the meetings gained momentum as they went along.

The presentation of "A Preview of Things To Come," featuring the Servel Unified All-Gas Kitchen Program, which is part of the New Freedom Gas Kitchen family, attracted considerable interest, attention and enthusiasm by those attending the meetings. This discussion included a series of charts showing the gas refrigerator models now in production, the new eye-level storage section, the food conditioning unit built over the gas refrigerator, and the air control cabinet built over the gas range designed to remove heat, moisture and cooking odors from the kitchen.

Complete Kitchen Units

The kitchen has been designed to be sold either as a complete unit or in three separate units, such as the food preservation unit containing the refrigerator, the crisping cabinet and side cabinets; the cleaning unit containing the sink and cabinets; and the preparation unit including the gas range with the air control cabinet and accompanying cabinets. A number of the new kitchens were depicted in color during the discussion. The Servel Product Training course was discussed in addition to the new publication, The Home Maker's Digest, which will be made available to local gas companies for distribution to the consumer.

The presentation was made under the auspices of the Refrigeration Committee of the Residential Gas Section by J. L. Johnson, sales manager, Providence Gas Co., Providence, Rhode Island, and chairman of the Refrigeration Committee for 1944-45; R. J. Canniff, advertising and sales promotional manager, Servel, Inc.; Al Howard and E. O. Olsen, sales promotional and advertising representatives, Servel, Inc.; and Mildred Clark, home service director of the Oklahoma Natural Gas Co., Tulsa, Oklahoma, who is a member of the Refrigeration Committee.

"Get a Load of This," presented by executives of the Ruud Manufacturing Co. of Pittsburgh, Pennsylvania, who represented the water heating sections of A. G. A. and A.G.A.E.M., was another highlight on the meeting program. This important and interesting discussion stressed the opportunity which exists for the gas industry to increase gas loads through the sale of automatic gas water heaters to customers owning

Amidst a United Nations' setting more than 200 Tulsans heard the latest gas promotion plans.

Inspecting the Tulsa display are M. H. ...rth, Mildred R. Clark, Frank Mc Ferran, ...W. Williams, Chairman J. H. Warden, ...C. Turney, H. P. Morehouse, W. J. Grover.

The Houston gathering under the chairmanship of Frank C. Smith, president, Houston Natural Gas Corp., took time out for "chow."

←Local company "big wigs" at the Birmingham meeting: Carlos Horne, Alabama Gas sales manager; Charles B. Gamble, president, Birmingham Gas Co.; Joseph N. Greene, president, Alabama Gas Co., and Charles R. Davis, Birmingham Gas vice-president.

With eight more meetings to go, the industry's five-star gas promotional program reached the nation's capitol on November 21. At the speakers' table are Frank McFerran, George Bean, F. W. Williams, R. C. Behaut, James I. Gorton, Roger A. Gordon, A.G.A. President Everett J. Boothby, Neal Phillips, C. S. Stockpole, Chairman Leon Ourusoff, J. A. Bronzonie, and E. O. Olsen.

automatic home laundry equipment.

A series of interesting graphs, charts and studies illustrated the importance of an adequate supply of really hot water which will be required to successfully operate the many thousands of automatic home laundries and dishwashers which will be sold in the near future. The speakers pointed out that competition will spend a tremendous sum of money in promoting the use of this equipment and that the revenue derived by the gas industry through the use of the automatic hot water heater in connection with such laundries will be five times greater than that derived by competition. A complete and concrete sales plan to promote the sale of gas automatic water heaters by the utility company and by local dealers, known as the "10 to 1 Plan," was well received by those present.

The presentation was made by G. M. Rohde, assistant to the president, Ruud Manufacturing Co., Elmer W. Cone, Kansas City distributor, Ruud Co., and Frank McFerran, sales manager, Ruud Co. Much of this presentation is reproduced in an article in this issue of THE MONTHLY.

"Green Troops Don't Win Battles" featured an oral and visual presentation of the Residential Gas Section's indoctrination course for all gas company employees. "The Fundamentals of the Gas Industry," and the specialized sales training course in "Residential Gas Salesmanship." The speakers pointed out that a "battle of the fuels" in the residential market has already begun and that all gas company employees must really know their business, know about the industry for which they work, how gas is made and distributed, how to maintain good relations with the public to build good will, and other important facts as a means of assisting in increasing gas loads. They stressed the increased efforts of competition from all industries to capture the consumer dollar and expressed the opinion that the gas industry must train its sales personnel to get ready to sell if the industry is to obtain its share of the consumer dollar. The discussion included a complete review of the courses and their operation and pointed out that the fundamentals course was now completed and available to the industry, with the salesmanship course scheduled for completion in February of 1946.

The presentation was made by F. W. Williams, secretary, Residential Gas Section, and R. E. Williams, sales manager, Binghamton Gas Works Co., Binghamton, New York, who is chairman of the Committee on Selection and Training of Sales Personnel.

Following is the schedule of meetings and the presiding chairmen:

Sept. 14, Montreal, Canada, Mont Royal Hotel, J. E. P. St. Joan, Montreal Consolidated Light and Power Co., Montreal, Canada.

Sept. 17, New York, N. Y., Biltmore Hotel, B. A. Seiple, vice-president charge of sales, Jersey Central Power & Light Co., Asbury Park, N. J.

Sept. 19, Hartford, Conn., Hartford Gas Co. Auditorium, N. B. Bertolette, president, Hartford Gas Co., Hartford, Conn.

Sept. 21, Boston, Mass., Boston Cons. Gas Co. Auditorium, J. J. Quinn, sales manager, Boston Consolidated Gas Co., Boston, Mass., Chairman of Residential Gas Section.

Sept. 25, St. Louis, Mo., Statler Hotel, R. J. Vandagriff, general sales manager, The Laclede Gas Light Co., St. Louis, Mo.

Sept. 28, Chicago, Ill., Stevens Hotel, W. M. Chamberlain, sales manager, Michigan Consolidated Gas Co., Grand Rapids, Mich., vice-chairman of Residential Gas Section.

Oct. 1, Milwaukee, Wis., Pfister Hotel, B. T. Franck, vice-president, Milwaukee Gas Light Co., Milwaukee, Wis.

Oct. 3, Minneapolis, Minn., Nicollet Hotel, George B. Johnson, Minneapolis Gas Light Co., Minneapolis, Minn.

Oct. 8, Seattle, Wash., Olympic Hotel, Norbert O. Pratt, vice-president Seattle Gas Co., Wash.

Oct. 10, Portland, Oregon, Portland Gas & Coke Co. Auditorium, R. G. Barnett, vice-president and general manager, Portland Gas & Coke Co.

Oct. 12, San Francisco, Cal., St. Francis Hotel, John S. C. Ross, manager, domestic sales, Pacific Gas and Electric Co., San Francisco, California.

Oct. 15, Los Angeles, Cal., Southern California Gas Co. Auditorium, F. M. Banks, vice-president, Southern California Gas Co., Los Angeles, Cal.

Oct. 19, Denver, Colo., Brown Palace Hotel, Roy G. Munroe, superintendent dealers and builders, Public Service Company of Colorado, Denver, Colo.

Oct. 23, Omaha, Nebraska, Fontenelle Hotel, W. J. Barber, assistant general manager, Metropolitan Utilities District, Omaha, Nebraska.

Oct. 26, Tulsa, Oklahoma, Mayo Hotel, J. H. Warden, sales manager, Oklahoma Natural Gas Co., Tulsa, Oklahoma, and chairman, Residential Gas Section.

Oct. 29, Dallas, Texas, Adolphus Hotel, D. A. Hulcy, president, Lone Star Gas Co., Dallas, Texas.

Nov. 1, Houston, Texas, Rice Hotel, Frank C. Smith, president, Houston Natural Gas Corp., Houston, Texas.

Nov. 5, New Orleans, La., Roosevelt Hotel, J. R. Guidroz, New Orleans Public Service Co., New Orleans, La.

Nov. 8, Jacksonville, Fla., George Washington Hotel, J. W. Owen, manager, Central Florida Gas Corp., Winter Haven, Fla.

Nov. 12, Atlanta, Georgia, Atlanta Biltmore Hotel, J. W. Lea, sales manager, Atlanta Gas Light Co., Atlanta, Ga.

Nov. 15, Birmingham, Ala., Tutwiler Hotel, Charles B. Gamble, president, Birmingham Gas Co., Birmingham, Ala.

Nov. 19, Roanoke, Va., Roanoke Hotel, E. V. Bowyer, sales manager, Roanoke Gas Co., Roanoke, Va.

Nov. 21, Washington, D. C., Statler Hotel, Leon Ourusoff, manager, utilization dept., Washington Gas Light Co., Washington, D. C.

Nov. 26, Philadelphia, Pa., Ben. Franklin Hotel, *Morning Session:* Frank Trembly, Jr., assistant sales manager, Philadelphia Gas Works Co. *Afternoon Session:* Austin Monty, residential sales manager, Philadelphia Electric Co.

Dec. 3, Cincinnati, Ohio, Gibson Hotel, R. J. Paulsen, director, dealers cooperative sales dept., Cincinnati Gas and Electric Co., Cincinnati, Ohio.

Dec. 5, Columbus, Ohio, Deshler-Wallick Hotel, F. T. Rainey, general sales manager, Ohio Fuel Gas Co., Columbus, Ohio.

Dec. 7, Detroit, Michigan, Statler Hotel, N. E. Loomis, merchandising manager, Michigan Consolidated Gas Company, Detroit, Mich.

Dec. 10, Cleveland, Ohio, Carter Hotel, J French Robinson, president, The East Ohio Gas Company, Cleveland, Ohio.

Dec. 12, Pittsburgh, Pa., William Penn Hotel, Christy Payne, Jr., sales manager, Peoples Natural Gas Co., Pittsburgh, Pa.

Dec. 14, Buffalo, New York, Statler Hotel, *Morning Session:* Earl C. Desmond, Sales Manager, Iroquois Gas Corporation, Buffalo, N. Y. *Afternoon Session:* S. B. Severson, vice president, Republic Light Heat & Power Co., Inc., Buffalo, N. Y.

Dec. 17, Rochester, New York, Seneca Hotel, R. E. Ginna, vice-president, Rochester Gas & Electric Corp., Rochester, N. Y.

F. P. C. Hearings

THE Federal Power Commission announced last month that the hearing in its Natural Gas Investigation is scheduled to begin at ten o'clock on Jan. 28, and will be held in Court Room Number two in the Post Office and Court House Building in Houston, Texas. Also announced was the hearing scheduled to begin at ten o'clock on February 11, in the Buena Vista Hotel, Biloxi, Mississippi.

Midwest Personnel Conference Scheduled

THE first A. G. A. Midwest Personnel Conference under the chairmanship of C. C. Jolley of the Natural Gas Pipeline Company of America, will be held at the Fontenelle Hotel, Omaha, Nebraska, on Tuesday, January 8.

Experiences in personnel matters since the last conference will be reviewed and discussed in detail. Ways and means of providing employment to the maximum number of returned veterans will be given considerable attention.

Joe T. Innis of the Northern Natural Gas Company and George C. Pardee of the Metropolitan Utilities District are in charge of the hotel arrangements for the conference.

We Believe . . .

BY GEORGE KETCHUM*

● That the basic responsibility of advertising is to assist in the economical selling of goods and services.

. . . that the very discharge of this responsibility, in the interest of both producer and consumer, is a partial discharge also of advertising's obligation to the free enterprise or profit-and-loss system of which advertising is a part.

. . . that mass production is dependent on mass distribution and mass consumption; that these can be sustained only by free competition, high sales volume, high rates of productivity, high wages, lowest prices and low unit profits; and that advertising is an essential instrument in this process.

. . . that advertising, which owes its existence to the system of free enterprise, should be a means of explanation and expression of that system.

. . . that this expression should be in terms of demonstrable and tangible benefits to the individual citizen on whose willingness to produce and desire to buy the success of the system depends.

. . . that the continuance of free enterprise depends on popular understanding of its aims, popular support of its practices, popular belief in its benefits; and that advertising is a means to all these ends.

. . . that the social resonsibilities of advertising are subordinate to its economic responsibilities, since lasting social gains must rest on solid economic foundations. An indigent people cannot be a free people.

All the above are reasons why we believe that, on most occasions, the best advertisement for an institution is an advertisement that will help to sell a product of that institution. The buyer who gets with his purchase the satisfaction of a greater service, a higher quality, a lower price, is one step closer to a belief in the company which makes the product and the industrial system which made the product possible. . . .

We believe, as stated in the beginning, that advertising's first job is to help in selling goods and services; if it does not succeed in that, it fails altogether. Just so, we believe that the first requirement of any business is to make a profit—honestly and in the public interest, of course.

But we believe also that every business man, and that includes every advertising man, has additional obligations to himself, his employers, his employees, his stockholders and customers, to society in general and to the free-enterprise system which makes possible his business and his success. Part of that obligation can be carried out by advertising *per se;* in other part, it can be discharged through public and private dealings of all kinds, in the daily working life of the individual and the corporation.

Seeing so much that is good in the American system, seeing so little that is incurably bad, we are strongly convinced that the main thing needed now is to present business processes and results, and the men who are responsible for them, in an understandable and deservedly admirable light.

* An advertising creed by the president of Ketchum, MacLeod & Grove, Inc., Pittsburgh, extracted from "Dividends."

A. G. A. Employees Donate Hospital Bed

A MAIN feature of the A. G. A. annual Christmas party, held Friday, December 21, was the announcement that funds had been raised by the Headquarters' employees for the purchase of a hospital bed. The bed was presented to the Hospital for Special Surgery, New York, better known as the Hospital for Ruptured and Crippled. A Bronze Plate will be placed on the bed with the inscription "Donated by Employees of American Gas Association 1945." The money was raised under the guidance of Dolores Marconi, who was in charge of the fund.

Other events of the Christmas party included amateur skits, singing of Christmas carols, dancing and refreshments. Carmine Veltri was in charge of the Program Committee, which consisted of Julia Blash, Rose Muschal, and Genevieve Munch. Staff advisors were Eugene D. Milener, Charles W. Person and Frank W. Williams.

Writes on Natural Gas

J. D. RATCLIFF, well-known writer on popular technical subjects, has an extensive magazine article on the natural gas industry in the December issue of *Popular Science Monthly*. Most of the article treats of "the chemical wonderland that holds a store of new products derived from natural gas."

The article is similar to the one the same author contributed to *Collier's* about two years ago.

A. G. A. Southwest Personnel Conference

THE A. G. A. Southwest Personnel Conference will be held at the Jung Hotel, New Orleans, Louisiana, Friday, January 11. Arrangements are being made by the vice-chairman, Howard Senyard, Louisiana Power & Light Company. Gas company executives in the Southwest area concerned with industrial relations are invited and will find the sessions most informative. Developments since the last conference will be reviewed and discussed.

Philgas Properties To Be Sold to Suburban

PHILLIPS Petroleum Company has entered into a contract for the sale of its Eastern seaboard retail Philgas properties, representing the largest distribution of liquefied petroleum gas in that section of the country, to the Suburban Propane Gas Corporation, a newly formed organization, for $11,000,000.

Properties to be sold are located in eight Atlantic Seaboard states and the District of Columbia, and under a purchase agreement Phillips will contract to supply the new company with all its gas requirements for a period of 20 years. In addition, Phillips will give advisory service and has granted the right to the use of certain patents, including those on its Self Service system.

The sale is conditional on the financing of the property purchase by the new company, which has filed a registration statement with the Securities and Exchange Commission.

Phillips Petroleum Company will continue its industrial and wholesale marketing of liquefied gas in the East and will become even more aggressive in the Mississippi Valley and Great Lakes areas in all phases of its marketing, including its retail and dealer bottled gas activities. No other change in ownership throughout its marketing territories is contemplated by Phillips.

29 Brooklyn Men Win Awards for Heroic Acts

Honored for Life Saving—Louis Backmann receiving McCarter award from Brooklyn Union Vice-President Hugh Cuthrell

FOR services "above and beyond the call of duty" 29 employees of The Brooklyn Union Gas Company were honored recently at special ceremonies.

Eight men received the coveted McCarter awards for saving lives through use of the Schafer prone pressure resuscitation method.

Three received the equally prized National Safety Council awards, also given for life saving by means of prone pressure.

Eighteen others received the company's Special Award for outstandingly meritorious acts, including life saving.

The awards recognized 18 separate instances of heroism. In 15 of them lives were at stake. In all instances the lives were saved.

The McCarter awards, named in honor of the donor, Thomas N. McCarter, who recently retired as chairman of the board of the Public Service Electric & Gas Company of New Jersey, and awarded by the American Gas Association, were presented to: Louis Backmann, chauffeur, transportation, a McCarter Bar, awarded for the second heroic act; John Cassidy, street department foreman; William A. Gerry, serviceman; John A. McHale, serviceman; Peter Prunty, assistant street department foreman; William T. Snyder, meter reader; Michael Kelly and Owen J. Vahey, both mechanics who received McCarter Certificates of Assistance.

The three Brooklyn Union employees who received National Safety Council awards were: Thomas Schecker, chauffeur, President's Medal; William J. Hallavan, serviceman, President's Certificate; and Walter A. Hohn, serviceman, President's Certificate.

Presentations to these and 18 other employees who received the company's special awards, were made by Vice-President Hugh H. Cuthrell at a special meeting of company officers and department heads held Nov. 29. Assistant Vice-President John E. Heyke read the citations describing the acts which won the awards.

Increase Capacity In Gas Lines

WEST TEXAS GAS COMPANY, Lubbock, Texas, has completed two projects which will increase the capacity of the company's main gas transmission line running south from the Panhandle gas field.

One project consisted of the installation of 11.4 miles of 10¾" O. D. loop line in Hale County, Texas, paralleling an existing line of the same size. The other project consisted of the installation of an additional 400 BHP compressor unit in the company's McSpadden Compressor Station in Randall County, Texas, about 17 miles southwest of Amarillo. These additions will enable the company to meet a system peak firm demand of 51 million cu. ft. per day during the present heating season.

The company's pipe line system consists of 855 miles of pipe, serving 44 cities and towns in the South Plains area of west Texas.

Koppers to Acquire Wailes Dove-Hermiston

J. N. FORKER, vice-president, Koppers Company, Inc., Tar and Chemical Division, has announced that negotiations are in progress for the acquisition by Koppers of all of the capital stock of Wailes Dove-Hermiston Corporation, producers of bituminous protective coatings. The latter company manufactures, distributes and applies a variety of special bituminous composition coatings primarily for the protection of steel and iron surfaces from the effects of corrosion.

Perfect Safety Record

THE natural gasoline department of Lone Star Gas Company, Dallas, Texas, has earned recognition from the National Safety Council for a perfect safety record representing 365 days of company operations without a lost-time accident, according to A. W. Breeland, supervisor of safety for the company. The record was established by four plants with a daily average of 67 employees who worked a total of 152,000 man hours without a disabling mishap. The contest year ran from July 1, 1944, through June 30, 1945.

A. G. A. Ad Reprint Popular

THREE weeks after the Committee on National Advertising of the American Gas Association had circularized the industry with sample copies of the 8-page reprint which presently appears in the Home Owner's Catalog, orders were received at headquarters in excess of 100,000 copies. A re-run of another 100,000 copies is now being made.

Entitled "Open the Door to a New World of Ease and Convenience," the 8-page pamphlet is produced in four-colors, features four of the most popular designs of New Freedom Gas Kitchens shown in the national ads, and has complete selling copy on gas cooking, automatic heating, air conditioning and refrigeration.

Quantity lots of the pamphlet are available at five cents a copy, F. O. B. New York. Address all communications to Committee on National Advertising, American Gas Association, 420 Lexington Avenue, New York 17, N. Y.

Electric Unit Aims To Equal Gas Speed

A NEW automatic electric range unit featuring a "supercharger," which for the first time produces heat in ranges with a speed said to be comparable to that of gas, was introduced December 18 by Proctor Electric Co., division of Proctor & Schwartz, Inc., Philadelphia, at a demonstration at the Savoy-Plaza in New York. The supercharger is a switch arrangement which over-energizes the element four times its normal operating temperature for thirty-five to forty seconds, sufficient to bring it to red heat.

Robert M. Oliver, a vice-president of the company, emphasized that the firm is not going into the electric range business. He said it will either manufacture the units and controls and sell them to electric range manufacturers, or will license existing producers to make them. Mr. Oliver said the unit could not be produced in quantity by his firm before the end of 1946.

A. G. A. Award Committees

MEMBERS of the Charles A. Munroe Award Committee who will select the individual making the greatest contribution to the gas industry have been named by Everett J. Boothby, president of the American Gas Association, as follows: Clifford E. Paige, president, The Brooklyn Union Gas Company, chairman; Burt R. Bay, president, Northern Natural Gas Company, and Dean H. Mitchell, president, Northern Indiana Public Service Company.

President Boothby also appointed members to the Beal Medal Award Committee. This committee confers the highest technical recognition in the gas industry upon the member contributing the best technical paper to an Association meeting during the year. Members appointed were: R. H. Hargrove, United Gas Pipe Line Co., chairman; Hudson W. Reed, The Philadelphia Gas Works Co.; Lester J. Eck, Minneapolis Gas Light Co.; H. D. Hancock, Gas Advisers, Inc.; Harry Sutton, Public Service Electric and Gas Co.; Frank H. Adams, Surface Combustion Corp., and A. Gordon King, American Gas Association, secretary.

Safe Homes Campaign

THE National Safety Council will launch a Safe-Homes Campaign in the coming spring. Purpose of the campaign is to call attention to the needless waste of lives in preventable home accidents and to reiterate the belief that safe homes save lives and make for better living. The emphasis is upon hazards built out and safety built in, not only for the house itself but also for appliances and equipment.

The campaign slogan is "Have a Home That's Safe." Seals bearing this slogan are available. In addition, two pages of graphs and written matter on Facts About Home Accidents have been issued. The National Safety Council is located at 20 North Wacker Drive, Chicago 6, Illinois.

Sees Petroleum Supply Good for 100 Years

GEOLOGISTS generally agree that more than 150 billion barrels of oil will be found in the Western Hemisphere and they place about 50 billion of these in the United States alone, according to Eugene Holman, president of Standard Oil Company (New Jersey), who tells in the January American Magazine of new petroleum reservoirs discovered under lake and sea areas.

Contrary to the belief of many who regard the U. S. reserve as 20 billion barrels—a conservative estimate of The American Petroleum Institute—"there will be plenty of oil," declares Mr. Holman, a world-traveled geologist who has been associated with his company's producing activities for more than 23 years. He says the 150 billion barrels is sufficient to last more than 100 years at the present rate of consumption.

Columbia System Move

IN a move aimed at the further simplification of one of the nation's largest natural gas companies, Stuart M. Crocker, president of Columbia Gas & Electric Corporation, announced that two of the Columbia System's operating groups will be combined under one management as of the first of the year.

Columbia's Seaboard group, operating pipeline and distribution facilities through Kentucky, West Virginia, Virginia and Maryland, will become part of the system's Charleston group, which comprises production, transmission and distribution properties in West Virginia, Kentucky and Ohio.

Harry A. Wallace, Jr., president of the Charleston group of operating companies will assume the presidency of the new group organization. Oliver S. Hagerman, now president of Seaboard, will become vice-president and general manager.

Bryant Heater Co. Expands Domestic Line

THE Bryant Heater Company has announced plans to make a number of additions to the Bryant line, such as gas-fired water heaters, vented wall heaters, portable space heaters, small non-vented wall heaters and floor furnaces.

These new features will be distributed through regular channels of the gas heating equipment trade. Inclusion of a complete range of modern water heaters will be made, and proposed models will offer a price range based on variations in size, insulation, and thickness of tank, and will feature flue baffles among other modern design details. A "low boy" type of hot water heater is also contemplated for kitchen installation, and will be packaged as a wall cabinet unit of the proper dimensions to fit into the kitchen alongside standard sinks, ranges and cabinets.

Wall heaters, suitable for installation in rooms where controlled unit heating is desirable, will be offered along with other units.

British Gas Council

AS a temporary measure the National Gas Council and the British Commercial Gas Association have been merged to form one governing body for England's gas industry, with the title of the British Gas Council.

The central council and the executive board have already been elected, and a new constitution is in the process of preparation. In view of this, the former separate bodies have virtually ceased to exist, therefore any communications to either should be addressed to the British Gas Council, Gas Industry House, 1, Grosvenor Place, London, S.W. 1.

Southwestern Gas Measurement Short Course

THE General Committee of the Southwestern Gas Measurement Short Course has set April 23, 24, and 25, as dates for the 1946 school to be held at the University of Oklahoma, Norman, Oklahoma.

Other business of the meeting which was held in Dallas recently included the election of committee chairmen and action on recommendations of the Executive Committee. Committee chairmen elected were as follows: Program Committee, R. M. Scofield, Lone Star Gas Company, Dallas; Publications Committee, C. E. Terrell, Southern Natural Gas Company, Birmingham; Exhibits Committee, J. L. Griffin, Northern Natural Gas Company, Omaha; Registration and Publicity Committee, Miss Kate A. Niblack, Oklahoma Utilities Association, Oklahoma City; Local Arrangements Committee, W. H. Carson, Norman, Oklahoma. W. H. Woods, Gulf Oil Corporation, Houston, is to continue to serve as Chairman of the Practical Methods Committee for another year.

J. H. Wimberly Named Vice-President

J. H. WIMBERLY was elevated to the position of vice-president and treasurer of the Houston Natural Gas Corporation on November 26 at a meeting of the company's board of directors held immediately following the annual meeting of stockholders.

All other officers of the company were re-elected as follows: Frank C. Smith, president; W. Tucker Blaine, Curtis H. Fisher and E. S. George, vice-presidents; and Grover Jones, secretary.

Mr. Wimberly, a native of Houston, graduated from the old Houston Heights high school in 1922 and entered Rice Institute in the fall of the same year. After completing his freshman year at Rice, he enrolled at the University of Texas in the fall of 1923, and subsequently received a Bachelor of Business Administration degree from that school in 1927.

Mr. Wimberly affiliated with Houston Natural as chief clerk of its accounting department in 1928. He was made company auditor in 1931 and continued in that capacity until 1940, when he was elected company treasurer and a member of the board of directors.

Philadelphia Men Win McCarter Medals

TWO employees of The Philadelphia Gas Works Company last month joined the gas industry's honor role as recipients of the McCarter Medals for outstanding acts of life saving. Louis Hoffman, fitter, and Thomas Delaney, auditor in the General Accounting Department, were singled out for resuscitating persons overcome by gas.

The presentation was made by Hudson W. Reed, president of the company and vice-president of the American Gas Association, at a staff meeting on December 11. In presenting the awards, Mr. Reed congratulated both men for their parts in life saving and in maintaining the company's standards of service to the public.

McCarter medals, which are presented by the American Gas Association, have been made to a total of 67 P.G.W. employees. The first medal to an employee of the Philadelphia utility was presented on April 22, 1925.

E. H. Hegmann Advanced

EDWARD H. HEGMANN has been appointed general auditor of the Philadelphia Company and Subsidiary Companies, Pittsburgh, Pa., C. T. Harmon, controller for the companies, announced recently. Mr. Hegmann was formerly auditor of receipts.

A graduate of the University of Pittsburgh's School of Business Administration in 1930, Mr. Hegmann entered the employ of the Philadelphia Company as an accountant on September 1, 1937, and has since served as assistant to general auditor and auditor of receipts. He is a member of the American Gas Association and the Pennsylvania Electric Association.

Lawrence J. McGraw, former chief clerk of the companies' Beaver Falls Accounting Department office, has been appointed auditor of receipts, filling the position vacated by Mr. Hegmann. Mr. McGraw attended Duquesne University's School of Business and Accounting, and the School of Business Administration at Geneva College. He entered the employ of the Philadelphia Company on May 1, 1924.

Wilmer J. Hadley has been appointed to Mr. McGraw's former position of Chief Clerk, Beaver Falls. He has been with the company since October 14, 1918, serving in various capacities in the accounting department.

Allen Retires

WALTER FOX ALLEN retired on his seventieth birthday December 12 as director of publicity for Public Service Corporation of New Jersey and subsidiary companies and as a director of the boards of the operating subsidiary companies.

Mr. Allen, who has been identified with the Publicity and Advertising Department of Public Service since 1922, succeeded the late John L. O'Toole as head of the department in 1942. He was elected a director of the operating subsidiary companies three years ago.

GAS COMPANIES*

Bellingham Gas Company, Bellingham, Washington (Stewart Matthews)

Coquille Gas & Power Company, Coquille, Oregon (J. A. Moore)

Hamburg Gas & Fuel Co., Oxford, Pa. (W. C. Roane)

Indiana Gas & Water Co., Inc., Indianapolis, Indiana (L. B. Schiesz)

The Dalles Natural Gas Co., The Dalles, Oregon (W. J. Swick)

Ware Gas Company, Ware, Massachusetts (George Oliver)

Wenatchee Gas Company, Wenatchee, Washington (Stewart Matthews)

ASSOCIATE COMPANIES*

E. Holley Poe & Associates, New York, New York (E. Holley Poe)

HOLDING COMPANIES*

The United Light & Railways Co., Chicago, Illinois (Frank L. Conrad)

MANUFACTURER COMPANIES*

Calif. Kinetic & Service Engineering Co., Los Angeles, Calif. (Fred Heyden)

Carbomatic Corporation, New York, New York (Francis M. Crossman)

Hayes Furnace & Manufacturing Co., Inc., Los Angeles, Calif. (Jay P. Essek)

Hoosier Industries, La Porte, Indiana (L. P. Corsbie)

L. J. Wing Manufacturing Co., New York, New York (H. S. Wheller)

Mulcare Engineering Co., New York, New York (G. L. Jennings)

The Parsons Company, Detroit, Michigan (Carl B. Parsons)

Norman Products Co., Columbus, Ohio (Edward A. Norman, Jr.)

Reading Brass Company, Hillsdale, Michigan (Don Fireoved)

Royal Heating & Sheet Metal Co., Emeryville, Calif. (Herbert Hofvendahl)

Tru-Temp Manufacturing Co., Canton, Ohio (Lake Parsons)

INDIVIDUAL MEMBERS

Douglas S. Aiken, Pacific Gas & Electric Co., San Francisco, Calif.

Arthur R. Ascolesi, Southern Counties Gas Co., Los Angeles, Calif.

L. A. Barham, Pacific Gas & Electric Co., San Francisco, Calif.

Geo. M. Bateman, American Stove Co., San Francisco, Calif.

Otis S. Blackstone, Southern Counties Gas Co., Los Angeles, Calif.

Clarence M. Bower, The Clintonian Fuel & Oil Co., Columbus, Ohio

D. E. Brashear, Equitable Gas Co., Pittsburgh, Pa.

Alton M. Bujard, United Gas Corp., New Iberia, La.

Wm. C. Bullock, Southern Counties Gas Co., Los Angeles, Calif.

J. C. Burns, Colorado Interstate Gas Co., Colorado Springs, Colorado

J. A. Byrnes, Gas Consumers Association, New York, N. Y.

Hilding Carlson, E. Holley Poe & Associates, New York, N. Y.

Geo. H. Clayton, Southern Counties Gas Co., Los Angeles, Calif.

Harold W. Clift, Delaware Power & Light Company, Wilmington, Delaware

Sam B. Cobb, Louisiana Public Utilities Co., Inc., Lafayette, La.

Francis M. Crossman, Carbomatic Corp., New York, N. Y.

Jan Dewidels, Unifurnaces Ltd., Farnley, Leeds, England

Albert E. Donehey, Boston Consolidated Gas Company, Boston, Mass.

James Drew, Southern Counties Gas Co., Los Angeles, Calif.

Charles C. Eeles, The Ohio Gas Co., Toledo, Ohio

(Continued on next page)

* Names in parantheses refer to Company Delegates of the American Gas Association.

Committee Calendar

JANUARY

•Distribution Conference Program Committee, Technical Section, American Gas Association, Headquarters, New York, N. Y. — 7

•Committee on Improving Domestic Gas Appliances (ranges), Hotel Carter, Cleveland, Ohio—F. M. Rosenkrans, Chairman — 10

•Distribution Conference Program Committee, Technical Section, American Gas Association, Headquarters, New York, N. Y.—T. H. Kendall, Chairman, Distribution; S. G. Page, Chairman, Motor Vehicles — 14

•Subcommittee on Approval of Domestic Gas Copy (Committee on National Advertising), McCann-Erickson, Inc., New York, N. Y.—J. J. Quinn, Chairman — 16

•Subcommittee on Approval Requirements for Gas Water Heaters, Cleveland Laboratories, Cleveland, Ohio—H. W. Geyer, Chairman — 22

FEBRUARY

•American Gas Association Executive Board, Headquarters, New York, N. Y. —Everett J. Boothby, Chairman — 6

APRIL

•American Gas Association Executive Board, Headquarters, New York, N. Y. —Everett J. Boothby, Chairman — 3

D. E. Farmer, Portland Gas & Coke Co., Portland, Oregon

C. W. Finn, Southern Counties Gas Co., Los Angeles, California

Charles A. Gallagher, Jersey Central Power & Light Co., Wildwood, N. J.

H. Roy Garratt, Consumers Gas Co. of Toronto, Toronto, Ontario, Canada.

D. G. Guiney, Public Service Co. of Colorado, Denver, Colorado

J. B. Haley, Gas Consumers Association, Detroit, Michigan

Warren D. Haley, Washington Gas Light Co. of Montgomery County, Takoma Park, Md.

Comm. John B. Heinicke, USNR, U. S. Naval Academy, Annapolis, Md.

M. J. Hiler, Sharples Chemicals, Inc., Chicago, Ill.

Edward W. Hoy, Carbomatic Corp., New York, N. Y.

James C. Jefferson, Northwestern Utilities, Ltd., Edmonton, Alta, Canada

Charles J. Johansen, Atlanta Gas Light Co., Atlanta, Georgia.

A. B. Kelly, Gas Consumers Association, Pittsburgh, Pa.

H. B. Matheny, Remington Rand Inc., New York, N. Y.

Calvin C. McEachern, United Gas Corp., Houston, Texas

A. C. Miller, Pacific Gas & Elec. Co., San Francisco, Calif.

Colin U. Miller, The Peoples Natural Gas Co., Johnstown, Pa.

Wm. D. Milton, Southern Counties Gas Co., Los Angeles, Calif.

H. Wurth Morgan, Reliance Regulator Corp., Alhambra, Calif.

Eleanor M. Morrison, Michigan Consolidated Gas Co., Grand Rapids, Mich.

John S. Nicholas, Vacuum Gas Appliance Div. of The Union Fork & Hoe Co., Rome, N. Y.

Geo. J. Norman, Southern Counties Gas Co., Los Angeles, Calif.

W. J. O'Donnell, Wisconsin Fuel & Light Co., Manitowoc, Wisconsin

Donald W. Peterson, Minneapolis Gas Light Co., Minneapolis, Minnesota

William H. Phillips, Kenneth A. McIntyre Associates, New York, N. Y.

Kenneth E. Reafsnyder, Southern Counties Gas Co., Los Angeles, Calif.

William A. Rhaesa, Michigan Consolidated Gas Company, Detroit, Mich.

Arthur Schultheis, Central New York Power Corp., Syracuse, N. Y.

D. S. Sharpe, Geo. D. Roper Corp., Atlanta, Ga.

James J. Sheehan, Texas Public Service Co., Galveston, Texas

Howard A. Simmons, Glenwood Range Co., Taunton, Mass.

Herbert H. Simon, Lincoln Brass Works, Los Angeles, Calif.

Walter D. Smith, Consolidated Edison Co. of N. Y. Inc., New York, N. Y.

Ralph E. Solomon, The Pittsburgh Water Heater Corp., Pittsburgh, Pa.

A. J. Strain, Ruud Manufacturing Co. Toronto, Ontario, Canada

W. Hubert Tappan, The Tappan Stove Co., Los Angeles, Calif.

Thomas E. Thibeau, The Connecticut Coke Co., New Haven, Conn.

Harry A. Tiemann, Public Service Co. of Colorado, Denver, Colorado

T. G. S. Walker, Honolulu Gas Co., Ltd., Honolulu, Hawaii

Edgar C. Weston, Rosslyn Gas Company, Washington, D. C.

Henry Clay Whiteford, Washington Suburban Gas Company, Hyattsville, Md.

Hanina Zinder, E. Holley Poe & Associates, New York, N. Y.

Jason A. Zurflieh, Mechanical Equipment Co., St. Petersburg, Florida

Convention Calendar

JANUARY

8 •A. G. A. Midwest Personnel Conference, Fontenelle Hotel, Omaha, Nebr.

11 •A. G. A. Southwest Personnel Conference, Jung Hotel, New Orleans, La.

17 •New England Gas Association, Operating Division, Hotel Statler, Boston, Mass.

28 •Independent Natural Gas Association of America, Annual Meeting, Texas State Hotel, Houston, Texas.

31 Feb. 1-2 •Home Service Work Shop, Hotel William Penn, Pittsburgh, Pa.

FEBRUARY

1 •Pennsylvania Gas Association, Midwinter Sales Conference (place to be selected)

4-5 •National Association of Purchasing Agents, Public Utility Buyers' Group, Edgewater Hotel, Chicago, Ill.

4-6 •Home Service Work Shop, Hotel Muehlebach, Kansas City, Mo.

4-8 •National Metal Congress & Exposition, Cleveland, Ohio

7 •Gas Institute of New Zealand, Wellington, New Zealand

18-19 •A. G. A. Technical Conference on Domestic Gas Research, Hotel Statler, Cleveland, Ohio

MARCH

21-22 •Southern Gas Association, Galveston, Texas

21-22 •New England Gas Association Annual Business Conference, Hotel Statler, Boston, Massachusetts.

28-29 •A. G. A. Conference on Industrial and Commercial Gas, Commodore Perry Hotel, Toledo, Ohio.

APRIL

8-10 •Mid-West Gas Association (place to be selected)

16-18 •A. G. A. Distribution Conference, Hotel Stevens, Chicago, Ill.

MAY

7-8 •A. G. A. Natural Gas Department, Annual Spring Meeting, Cincinnati, Ohio

7-9 •Pennsylvania Gas Association 38th Annual Meeting, Galen Hall, Wernersville, Pa.

JUNE

3-5 •A. G. A. Production and Chemical Conference, Hotel Pennsylvania, New York, N. Y.

3-6 •National Fire Protection Association, Boston, Mass.

18-21 •Canadian Gas Association, 39th Annual Convention, Manor Richelieu Hotel, Murray Bay, Quebec

OCTOBER

Wk. of 7th •American Gas Association, 28th Annual Convention and Exhibition, Atlantic City, N. J.

Accounting Section

E. F. EMBREE, Chairman | LEITH V. WATKINS, Vice-Chairman | O. W. BREWER, Secretary

Accountants Make Plans for 1946

SINCE the Annual Business Meeting which was held in New York City on October 24, 1945, the Accounting Section has been laying the groundwork for its activities during the current Association year. The usual solicitation of member companies for committee personnel has been completed and several meetings of various groups have been held to prepare for the Joint Conference of Gas and Electric Industry Accountants, which will be resumed in 1946, after cancellation in 1945 due to wartime restrictions on travel and conventions, and also for the 1946 Annual Fall Meeting of the Association, when it is expected the Section's activities, which have been curtailed in 1944 and 1945 to the election of officers and routine matters, will be expanded to include a program of interest to the accountants of the industry.

A meeting of the Section Officers, Group Coordinators and Committee Chairmen was held in New York City on the morning of November 15, 1945 for a general discussion of the year's activities and to make definite plans for the organization meetings of the various committees which were to be held jointly with the corresponding committees of the Edison Electric Institute. In the afternoon the group met with the E.E.I. Accounting Division Officers and Chairmen to coordinate the plans of the two Associations for the Joint Spring Conference, which it was decided would be held at the Netherland Plaza Hotel in Cincinnati, Ohio, on April 1, 2 and 3, 1946.

Customer Activities' Program

The Customer Activities Group, under the leadership of A. G. A. Coordinator, J. H. W. Roper, Washington Gas Light Company, and E.E.I. Chairman F. W. Phelps, Union Electric Company of Missouri, held a joint two-day meeting at Cleveland, Ohio, on November 26 and 27. The first day was devoted to separate committee meetings and the second day to a group discussion of the studies and reports to be undertaken by the various committees.

The Customer Accounting Committee, under A. G. A. Chairman R. F. McGlone, The East Ohio Gas Company, and in collaboration with an E.E.I. subcommittee headed by Tracy Fabian, The United Illuminating Company, propose to study and report on the following:

1. Customer Billing System Utilizing New Developments in Office Machines—a report on billing systems suggested by equipment manufacturers utilizing their new equipment.
2. Status and Future of Bi-monthly Billing.
3. Methods of Control Bookkeeping—a report on various methods of accumulating figures for accounts receivable control.
4. Multiple Sectional Meter Reading (Zone Meter Reading)—a report defining zone meter reading and its relation to other routines such as billing, cashiering, collecting, etc.

The Customer Collections Committee, under A. G. A. Chairman H. F. Quad, Public Service Electric and Gas Company, and in collaboration with E.E.I. subcommittee headed by W. A. Kelly, Consolidated Gas, Electric Light and Power Company, proposes to study and report on a general, dominant theme, "Collections—Past, Present and Future." This subject will be approached by reporting on at least four different phases of collection and credit activities, which include:

1. Deposit Policies—revision to meet changing economic conditions.
2. Final Bills—types of treatment and amount of effort and time allowed before charge-off.
3. Uncollectibles—possibility of control by analysis of past and current economic conditions.
4. Field Collection Representatives—the extent of their use and effectiveness.

Combined committee discussions also developed several related topics which will be given consideration. It is planned to cover these additional subjects and the ones proposed above by full committee action where practicable, and by individuals or subcommittee groups where such treatment is indicated.

The Customer Relations Committee, under A. G. A. Chairman L. W. Simmons, Northern Indiana Public Service Company, and in collaboration with an E.E.I. subcommittee, headed by W. E. Sturm, West Penn. Power Company, selected the following subjects for study:

1. A Customer Service Policy—an attempt to present what an ideal and sound policy should be in handling customers from the time the customer places his order to the time service is terminated and the last bill rendered and collected.
2. Improving Customer Relations Through Employee Training—a study to determine what training is fundamental and necessary, other than job training, to prepare and qualify employees representing the company to the customers, either in person, by telephone, or by correspondence to make the best possible contacts for achieving pleasant customer relations. The training programs of a number of companies will be reviewed in connection with this study.
3. A Commercial Representative Plan—a study to determine the advantages and disadvantages of commercial representatives in place of conventional meter readers.
4. A Study of Opinion Polls—to cover methods and results of polls made by several utilities to secure customer opinions of their companies.

The General Activities Group, headed by A. G. A. Coordinator W. D. Virtue, Public Service Company of Colorado, held a two-day organization meeting with the corresponding group of the E.E.I. on December 17 and 18 at Cleveland, Ohio.

E. F. Embree
Chairman, Accounting Section

L. V. Watkins
Vice-Chairman, Accounting Section

J. H. W. Roper
Coordinator, Customer Activities Group

W. D. Virtue
Coordinator, General Activities Group

General Accounting Activities

The General Accounting Committees, under the leadership of A. G. A. Chairman A. W. Hatch, Ebasco Services, Inc., and E.E.I. Chairman W. C. Young, Public Service Electric and Gas Company, after a discussion of several subjects which had been suggested for consideration decided to assign six specific subjects to subcommittees, the nature and scope of the assignments being as follows:

1. Accounting Employee Training—to study employee training programs and methods with particular reference to utility accounting and clerical personnel and prepare a report on the objectives, principles, and methods for such employee training. Consideration to be given to all phases of a complete program, including induction training, supervisory training, job training, and general information and training programs. It will be desirable to show examples of practices in use by representative utilities or other companies. An exhibit of specimen training media, booklets, etc. of a number of companies for presentation at the Spring Conference is also desirable to supplement the committee's report.

2. Accounting Personnel Relations—to maintain liaison with the Personnel Committees of A. G. A. and E.E.I. so as to determine work such committees are equipped to perform and to assist such committees. The subcommittee's assignment is to request the Personnel Committees to perform or assist in supplying information for report on at least one subject, such as detailed comparisons of ten key accounting and clerical jobs, hiring techniques, wage incentive plans for accounting and clerical personnel, etc.

3. Cost Analysis and Control—to prepare a report on the limitations of cost comparisons among companies. In addition, this subcommittee will cover the so-called functional accounting field and its contribution to cost accounting, management reports, cost responsibility, internal and budgetary control, etc.

4. Accounting Machine Developments—to investigate and report on new machine developments and their application to utility accounting methods.

5. General Accounting Methods—to investigate and report on a complete payroll procedure adapted to meet present conditions, and to comment on each step in such procedure. In addition, this subcommittee will investigate other general accounting methods giving particular attention to the use of clearing accounts for stores and transportation expenses.

6. Uniform System of Accounts—to deal with any problems arising with respect to clarification or improvement of the uniform system of accounts.

The Materials and Supplies Committee, under the leadership of A. G. A. Chairman G. B. Herr, The Peoples Natural Gas Company, decided to expand their activities to parallel those of the corresponding E.E.I. committee by including Purchasing and Stores Operations along with Stores Accounting subjects in their program for the year. The topics to be taken up by various subcommittees are as follows:

1. Purchasing and Stores Accounting—accounting for reels, drums and containers, minor material accounting, and accounting for maintenance and spare parts held for use in production and transmission.

2. Purchasing—standardization trends and purchasing agent's functions, expediting, transportation and traffic.

3. Stores Operation—control of non-standard and obsolete items, receiving materials for stock, including inspection, and storage of poles, wood products and pipe.

4. Stores Equipment and Building—pallets versus platforms as a means of handling, storing and dispensing stock materials, stores handling equipment, including treatment of manual and self-propelled low-lift and high-lift trucks, yard cranes, tractors, etc. and storeroom lighting.

5. Salvage—rehabilitation of valves of all sizes removed from service for reuse and procedure of salvage on material returned to stock from construction or plant.

The Property Record Committees, under the leadership of A. G. A. Chairman R. McClanahan, Middle West Service Company, and E.E.I. Chairman A. L. Davies, West Penn Power Company, will set up subcommittees for the following:

1. Standard Unit Costs—to make a survey and report of methods used by member companies in determining standard unit costs and the application to current actual costs.

2. Land and Land Rights—to look into the practical recording of costs and description of electric distribution land rights, retirement of land rights abandoned or otherwise disposed of, the difference, if any, in the requirements of the various State Commissions with respect to the type of records to be kept, the recording of costs, etc. of natural gas producing lands, leaseholds, royalties and other rights in the land records, and the determination of how various companies clarify costs of clearing distribution of rights of way.

3. Retirement Units—to develop first a statement of practices followed by member companies with respect to the FPC list of retirement units and the presentation of lists which have been expanded, to be followed by a report on the theoretical advantages and disadvantages of expanded units over the FPC list and the probable effect upon plant investment, maintenance, depreciation and property records.

The Taxation Accounting Committees under the leadership of A. G. A. Chairman I. M. Avent, United Gas Pipe Line Company, and E.E.I. Chairman W. S. Alt, Union Electric Company of Missouri, spent two days in a discussion of and exchange of ideas on the following tax subjects which had been prepared for the meeting:

Section 722, Tax Adjustment Act of 1945, Problems Involved in Repeal of Capital Stock Tax and Declared Value Excess Profits Tax, T. D. 5480—Information Form 1099, Interest on Over-payments from Recomputation of Taxes in Case of Commuted Amortization Period, Section 711(b)(1)(J), Specific Problems in Amortization of Defense Facilities, Deferred Maintenance, Accelerated Depreciation in Early Years of Property, Relief under Section 721 and Miscellaneous Problems.

(Continued on page 48)

A. W. Hatch
Chairman, General Accounting Committee

G. B. Herr
Chairman, Materials and Supplies Committee

R. McClanahan
Chairman, Property Records Committee

I. M. Avent
Chairman, Taxation Accounting Committee

C. E. Packman
Chairman, Advisory Committee

R. F. McGlone
Chairman, Customer Accounting Committee

H. F. Quad
Chairman, Customer Collections Committee

L. W. Simmons
Chairman, Customer Relations Committee

Residential Gas Section

J. J. QUINN, Chairman | WALLACE M. CHAMBERLAIN, Vice-Chairman | F. W. WILLIAMS, Secretary

Regional Home Service Workshops Planned

REGIONAL Home Service Workshops are planned for Pittsburgh January 3, February 1 and 2, and Kansas City February 4, 5 and 6. Sponsored jointly by the 1945 and 1946 Home Service Committees of the A. G. A. Residential Gas Section, purpose of the workshops is to renew attention to the special function of home service in sales promotion.

The subjects for both programs are similar but participation is regional. J. H. Warden, sales manager, Oklahoma Natural Gas Company, Tulsa, sets the theme at both workshops with the subject, "1946 Gas Promotion and Equipment." "Greetings" in Pittsburgh will be extended by W. L. Hutcheson, chairman of Cooperative Sales Committee for the natural gas companies in Pittsburgh; and in Kansas City by B. C. Adams, president, Gas Service Company, Kansas City Gas Company and Wyandotte County Gas Company. In each case the program has been set up to include the following topics:

Contacts for 1946 Promotion—Discussion to include brides' classes, children's classes, club groups, company groups, radio and newspaper articles.

Practical Kitchen Planning with special emphasis on its promotion and tools; School Kitchens.

Under home service organization and operation, the topics: "What Makes an Efficient Home Service Department"; "Promotion in a One-Girl Department," "Selection and Training of Home Service Personnel" and an actual sales-slanted demonstration will be presented as will sketches of four different types of home calls. "Factors Governing Finished Products in Food Preparation" will be discussed at both conferences by Elizabeth Sweeney, Editor, Household Equipment, *McCall's Magazine*.

Speakers at the Pittsburgh Workshop will include:

Kathryn Barnes, Equitable Gas Company, Pittsburgh, Pa., as the chairman; Anne McManus, East Ohio Gas Company, Cleveland, Ohio; Margaret Holloway, Consolidated Gas, Electric Light & Power Company, Baltimore, Md.; Evelyn Gardener, Station KDKA, Pittsburgh, Pa.; Eloise Davison, Herald Tribune Institute, New York, N. Y.; Mary Belle Burnette, Cincinnati Gas & Electric Co., Cincinnati, Ohio; Member of Home Economics Department of Public Service Electric and Gas Company, Newark, N. J.; H. Carl Wolf, Jessie McQueen and H. Vinton Potter, all of the American Gas Association; Ruth Sheldon, Washington Gas Light Co., Washington, D. C.; Ruth Soule, The Brooklyn Union Gas Co., Brooklyn, N. Y.; Fleta Matson, Binghamton Gas Works Co., Binghamton, N. Y.; Jeanette Campbell, Minneapolis Gas Light Co., Minneapolis, Minn.; Flora Dowler, Manufacturers Light & Heat Co., Pittsburgh, Pa.; Helen Kirtland, New Jersey Power & Light Co., Dover, N. J.; Hulda Ungericht Wells, Ohio Fuel Gas Co., Columbus, O.

Speakers at the Kansas City Workshop will include:

Colleen Fowler, Kansas City Gas Company, Kansas City, Mo., as the chairman; Vivian Marshall, New Orleans Public Service Co., New Orleans, La.; Doris Heidrick, Gas Service Company, Wichita, Kansas; Margaret Crooks, Iowa-Illinois Gas & Electric Co., Rock Island, Ill.; Katherine Rathbone, Southern Counties Gas Co., Los Angeles, Calif.; Julia Hunter, Lone Star Gas Co., Dallas, Texas; Katherine Goeppinger, Iowa State College, Ames, Iowa; Jessie McQueen and H. Vinton Potter of American Gas Association; Harry Swenson, The Peoples Gas Light & Coke Co., Chicago, Ill.; Irene Muntz, Rochester Gas & Electric Corp., Rochester, N. Y.; F. M. Rosenkrans, The Gas Service Co., Kansas City, Mo.; Jeanette Campbell, Minneapolis Gas Light Co., Minneapolis, Minn.; Thelma Bly, Wisconsin Power and Light Co., Fond du Lac, Wisconsin; Ruth Shank, St. Louis County Gas Co., Webster Groves, Mo.; Helen Brown, Kansas City Gas Co., Kansas City, Mo.; Mildred R. Clark, Oklahoma Natural Gas Co., Tulsa, Okla.; Fay Rudolph, Southern Indiana Gas & Electric Company, Evansville, Indiana; May McLoughlin, Central Illinois Light Co., Peoria, Illinois.

Brides' Display Attracts Attention

Throughout the properties of the Public Service Electric & Gas Company in New Jersey classes for brides have been attended by numbers which have crowded the home service auditoriums. This window display in the Newark office attracted much attention particularly because of the novel figure in bridal robes wearing a checked apron. The subject of brides' classes attracted national attention during the war years and continues to take such a prominent place in home service activities that it is a leading topic on the A. G. A. Home Service Workshop Program.

GET A LOAD OF THIS!

(Continued from page 18)

ance of the water heater you sell to him. So, check quality and performance. What sales help will the manufacturer give? What does he have in the way of advertising and promotion?

How about Section No. 3?

Why, a store, of course,—a headquarters for all your sales activities; a place where people can go to see water heaters, learn how they work; where they can ask questions and get information.

You have a store, of course. But check these points to make sure that water heaters are getting the *big break*, that they deserve as a major load-builder.

3. THE UTILITY STORE

Full Line
Position
Glamour
Tools
People

Show a full line—the popular sizes—and don't limit your showing to one each of each size. Have enough water heaters around to make people realize you're really in the business.

Give water heaters a good position on the floor. Put them where the traffic passes. Many companies put water heaters on a twelve or eighteen inch stand to give them better eye-value. That's a simple idea but it *works*.

Doll up your display with a background or other decorations. Water heaters need glamour and plenty of it.

See that you have the right selling tools on hand—metal samples, pictures, printed matter, lists of satisfied users, and all the rest.

And,—*people*,—see that you have some real salesmen on the floor and that they know the new hot water story; that they know that each extra minute the hot water faucet is busy, builds up 3570 B.t.u. in new gas sendout. Store people are important; you spend money to bring prospects to your sales floor, so don't let your sales people fumble the ball for want of thorough grounding in the whole hot water story.

Now, we're really getting into business and Mr. Prospect's beginning to look a little worried.

Section No. 4 is *The Utility Salesman.*

We need *salesmen*, brother, and *how*; good salesmen, salesmen who can produce. You can be very sure that the public isn't going to come in and take these water heaters away from us. Most of the water heaters that have been sold in the past and most of the water heaters that will be sold in the future will be sold in *The Home*—and you need salesmen who can go to the homes and make the sale.

4. THE UTILITY SALESMAN

Selection
Compensation
Training
Organization
Enthusiasm

Most of you have heard the American Gas Association's story of selection; it's good.

Compensation is equally as important. Make it possible for a salesman to make some real money if he *produces*.

Use the very fine A. G. A. training program and, with it, be sure that they know the product story and the new hot water story. Most manufacturers, I'm sure, will have some very excellent training material.

Organize these activities so they'll work productively, and see that they get big gobs of enthusiasm each and every day by giving them a water heater program they can be enthusiastic about.

Another section of our Ten to One fence brings us to the half-way mark. Here it is—*The Utility Home Service Department.* What a chance the Home Service Department has to win fame and fortune by tying right in with the new home's new hot water needs—the automatic laundry machine, the automatic dishwasher, the temperature story, the new ways of using hot water and all the rest.

For years, the Home Service Department has been willing and ready to promote gas hot water, but they have never had the strong story they have had in the range and refrigerator. Now they have it.

5. THE UTILITY HOME SERVICE DEPARTMENT

Know It
Tell It
Demonstrate

The first step, of course, is to know the hot water story—quantity, temperatures, the machines, the fabrics, the methods and so on.

And when they have the story, make its telling and demonstration a major home service activity—in home calls, in inside and outside meetings, in company meetings, on the sales floor, in literature and in every phase of home service work.

The sixth section of our Ten to One Fence is *The Utility General Employee.*

In pre-war days, a great employee job was done by many companies and this is an important section of the Ten to One fence that will pay off at the rate of Ten to One—and many times over.

6. THE UTILITY GENERAL EMPLOYEE

Know It
Tell It
Practice It

The employee hot water story is one that is reduced to its simplest effective terms. Give him the fundamentals in a way that he'll remember; encourage him with prizes, bonuses and in other ways. Drive the story home to him, so it will be a regular part of his conversation to people he meets in business, to his friends, relatives and acquaintances. And, above all, see that he practices what he preaches by making him an attractive proposition to have an automatic gas water heater in his own home.

No. 7 of our Ten to One fence, one who is not in your organization, but who can be made into a very powerful sales ally, is the *Automatic Water Heater User*—the man who *has a gas water heater in his own home.* Don't forget him; he's worth his weight in diamonds. Make him realize the value of his water heater; encourage him to talk about it to others.

7. THE AUTOMATIC WATER HEATER USER

Satisfaction
Indorsement
Enthusiasm
Tell It

See that the owner's water heater operates satisfactorily. Sometimes a good water heater is penalized by a poor installation. Or, maybe the size was once all right, but now too small, because of the increased requirements of the new appliances. In these cases, make it easy for your customer to get the right size.

Satisfaction leads to *indorsement* and indorsement can easily be translated into *en-*

(Continued on page 47)

Selling

● William Maxwell, before he died, was one of the country's most successful and well-liked sales managers. As head of the famed Thomas A. Edison's sales department he was well-known throughout the country.

Once he wrote eight rules for successful selling, and through the courtesy of Edwin C. Barnes, Chicago distributor for Ediphones, we publish them here. They are:

1. *Proper handshake*—hearty, friendly, decorous grip of a man who's glad to see another man.
2. *A sincere smile*—all over the face, in other words.
3. *Erect posture*—a physical slump means a sales slump.
4. *Right voice tones*—express confidence and sincerity.
5. *Careful pronunciation*—let the other man hear your sales talk.
6. *Mental alertness*—cultivate a quick grasp of all the angles.
7. *Self-confidence*—if you believe in yourself, others can be persuaded.
8. *Thorough preparation*—know everything about your business—his business—your goods—his problem.

—*Dartnell Corporation.*

Industrial & Commercial Gas Section

HARRY A. SUTTON, Chairman | KARL EMMERLING, Vice-Chairman | EUGENE D. MILENER, Secretary

Section Maps Year's Program

AT the December meeting of the Industrial and Commercial Gas Section Managing Committee, the chairman of the Section, Harry A. Sutton, outlined the scope of activities that will come under the leadership of the respective committee chairmen for the year 1946. The attendance at the meeting was most gratifying with all the committee chairmen being present, together with members-at-large and representatives of affiliated Associations. Announcement was made of the Section's planned participation in the forthcoming Metal Exposition early in February and the one to be held in October, also that the Section would have its annual conference March 28 and 29 in Toledo.

Heat Treating Committee

The several committee chairmen gave short reports on the projects and activities which their committees would undertake during 1946. The Committee on Heat Treating and Finishing with Gas is a group of experienced gas company and manufacturers' industrial gas men whose chairman, Charles C. Eeles of the Ohio Fuel Gas Company, Toledo, has been active in Association work as a committee member, and who is serving his first term.

Mr. Eeles and his group have planned a full program which will undoubtedly carry over into another year. They propose to prepare for distribution to the Section membership several "Information Letters" on heat treating and finishing. A major project will be to investigate and evaluate proposed tests to determine advantages, if any, of infra-red versus convection heating for industrial finishes. Plans and arrangements have already been made to proceed with these tests.

Other projects include the possible development of pot furnaces having longer life in order to compete more successfully with electric units; and pursue further studies in order to secure more information on the subject of high speed gas heating versus induction heating that will be of aid to gas men. Further plans of this committee are, the consideration of how to put local experience on unusual applications and successfully met competitive problems at the service of the whole gas industry, and plans for bringing to the repeated attention of management the importance of the industrial gas load.

In addition to Chairman Eeles, this committee includes Eugene D. Allen, Selas Corp. of America, Detroit, Mich.; Hale A. Clark, Michigan Consolidated Gas Co., Detroit; R. B. Grossman, So. California Gas Co., Los Angeles, Calif.; Andrew C. Huston, Worcester Gas Light Co., Worcester, Mass.; A. H. Koch, Surface Combustion Corp., Toledo, Ohio; C. H. Lekberg, Northern Indiana Public Service Co., Hammond, Ind.; O. D. Pritchard, Brooklyn Union Gas Co., Brooklyn; Bert H. Roberts, Minneapolis Gas Light Co., Minneapolis; H. E. G. Watson, Consumers Gas Co. of Toronto, Toronto, Ont.; and Eugene D. Milener, American Gas Association, New York, N. Y.

Non-Ferrous Metals Committee

The Non-Ferrous Metals Committee includes a number of men who served during the war on the Aluminum and Magnesium Melting Committee. Its scope has been broadened to include the whole non-ferrous metals field. The committee proposes to follow through with some comparative tests on melting aluminum with gas, oil and induction heating at two or three foundries where such tests have already been initiated. From these tests factual data may be published for the benefit of industrial gas men promoting the use of gas fuel in foundries.

One suggestion made was for this committee to develop a Standard Practice Procedure to recommend to non-ferrous foundries. This development would require the evaluation of the necessity for controlling all phases of the melting cycle to prevent overheating, too rapid heating and holding metal too long at heat, all of which improperly controlled features reflect unsatisfactorily on the fuel used, as well as the quality of the casting.

The Non-Ferrous Metals Committee is composed of the following: C. George Segeler, *Acting Chairman,* American Gas Association, New York; Hale A. Clark, Michigan Consolidated Gas Company, Detroit; Wayne

Officers and Committee Chairmen of the Industrial and Commercial Gas Section at the December organization meeting. Left to right: Leon Ourusoff, Chairman, Food Service Equipment Committee; Ralph L. Manier, Syracuse, New York; J. P. Leinroth, Chairman, National Advertising Committee; Harry A. Sutton, Chairman, Industrial and Commercial Gas Section; Charles C. Eeles, Chairman, Committee on Heat Treating and Finishing with Gas; Karl Emmerling, Vice-Chairman, Industrial and Commercial Gas Section; Eugene D. Milener, Secretary, Industrial and Commercial Gas Section, A. G. A.

Photographed at the Managing Committee meeting were, left to right: H. Leigh Whitelaw, Managing Director, Gas Appliance Manufacturers Association (AGAEM); H. Carl Wolf, Managing Director, A. G. A.; W. Frank Roberts, President, Standard Gas Equipment Corp.; Harry A. Sutton, Chairman, Industrial and Commercial Gas Section

H. Gunselman, Samuel Greenfield Co., Inc., Buffalo; George P. McCabe, Brooklyn Union Gas Co., Brooklyn; Stephen G. Moran, Consolidated Gas Electric Light & Power Corp., Baltimore; P. T. Stroup, Aluminum Research Laboratories, New Kensington; A. M. Thurston, The East Ohio Gas Co., Cleveland, Ohio; Ernest L. Woods, Springfield Gas Light Co., Springfield, Mass.; W. Wirt Young, W. Wirt Young & Associates, Waterbury; and Eugene D. Milener, American Gas Association, New York.

Food Service Equipment Committee

The Industrial and Commercial Gas Section has been fortunate in having Leon Ourusoff, Washington Gas Light Company, with his valuable experience and background to head the Food Service Equipment Committee. Mr. Ourusoff brings to the committee a spirit of enthusiasm that augers great accomplishments by this group and a year of constructive and progressive ideas. The problem in this field is to keep the large replacement market on gas as well as to get the new market for gas commercial cooking and baking equipment. Commercial cooking establishments must be kept informed and sold on the superiority gas fuel and gas equipment in the face of attempts of competition to break into what has been generally accepted as an exclusive gas field where gas is available. This committee is also going to complete the Food Service Equipment Manual early in 1946 so that commercial gas men may have the benefit of this valuable book, "The Commercial Kitchen," during the reconversion period.

Chairman Ourusoff is supported on this committee by W. S. Anderson, Boston Consolidated Gas Co., Boston; R. V. Bauer, Ebasco Service Inc., New York; D. J. Brogan, The G. S. Blodgett Co., Inc., Burlington; L. E. Clancy, Detroit Michigan Stove Co., Detroit; Walter D. Crouch, Robertshaw Thermostat Co., Youngwood; H. C. Erhard, Standard Gas Equipment Co., Baltimore; W. H. Frick, American Stove Co., Cleveland; Charles C. Hanthorn, The Philadelphia Gas Works Co., Philadelphia; A. O. Leech, Portland Gas & Coke Co., Portland; Newell E. Loomis, Michigan Consolidated Gas Co., Detroit; R. D. McMahon, So. California Gas Co., Los Angeles; R. F. McCrum, Equitable Gas Co., Pittsburgh; Thomas M. Offutt, Washington Gas Light Co., Washington; J. A. Rockefeller, Public Service Electric & Gas Co., Newark; Harry B. Wilson, The Brooklyn Union Gas Co., Brooklyn; Roy E. Wright, New England Gas & Electric System, Cambridge; and Eugene D. Milener, American Gas Association, New York.

Advertising Committee

Last but not least in importance to the Section, is the National Advertising Committee which will continue under the leadership of J. P. Leinroth, Public Service Eelectric & Gas Co., Newark, N. J. Mr. Leinroth has already set up and put into operation the largest national advertising program ever sponsored by the Section.

The expanded program with increased funds that were made available last year has given this group the opportunity of producing an adequate campaign, and is a challenge to be met by increased sales of gas. This year's advertising program is a long way from the small beginnings of many years ago. It has now reached national coverage through 24 trade magazines, 37 engineering college publications, totaling 535 pages of advertising having some 600,000 circulation in 16 fields. In addition a publicity division has been recreated to disseminate information on the utilization of gas to even a broader field than that covered by national advertising.

Following is Chairman Leinroth's supporting cast: F. B. Jones, Vice-chairman, Equitable Gas Co., Pittsburgh; D. D. Beach, Atlanta Gas Light Co., Atlanta; Will C. Grant, Lone Star Gas Co., Dallas; D. P. Hartson, Equitable Gas Company, Pittsburgh; Ronald A. Malony, The Bridgeport Gas Light Co., Bridgeport; Henry Obermeyer, Consolidated Edison Co., New York; and Eugene D. Milener, American Gas Association, New York.

A. G. A. at the Metal Show

THE East Ohio Gas Company and the American Gas Association are co-sponsors of the "Industrial Gas Center" at the National Metal Exposition and Congress which will be held in Cleveland's Public Auditorium, February 4 to 8.

Located on a main aisle of the exposition and surrounded by exhibitors of gas-fired equipment, "The Center" will be the focal point of gas industry men.

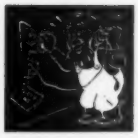
Another long-standing feature that is eagerly looked forward to is the Industrial Gas Breakfast which has had a growing attendance each year. Wednesday morning February 6 at 8:30 a.m. in the Hollenden Hotel, Cleveland, is the time and place.

Toledo Conference Drawing Near

PRELIMINARY reports from the program committee for the Industrial and Commercial Gas Conference to be held at the Commodore Perry Hotel in Toledo on March 28 and 29 indicate that an all-star cast of top-flight industrial and commercial men of the gas industry will present many papers of great interest. Ralph Wenner and his committee are doing yeoman service to make this conference one of the outstanding gas industry events of the year.

A prominent trio at the meeting—left to right: H. Carl Wolf, Managing Director, A. G. A.; Leon Ourusoff, Chairman, Food Service Equipment Committee; Roy E. Wright, NEGA Service Corp., Cambridge

gas grapevine



can you remember 'way back in 1940 when american hotels served approximately one billion meals to guests? well in 1945 the number of meals will jump to one and one half billion! that isn't all, restaurants will serve in addition four and one half billion meals, making a total of six, yet six billion meals outside of homes—wow—that's a lot of dishes to wash. gas water heating guys take notice remember it's gotta be 180 deg. or the dishes ain't sterilized.

"industrial gas sales show significant gain after v-j day decline" says the brooklyn union gas news. there was an immediate drop in the industrial gas load after v-j day, but during november the indications were that the wartime peak was being rapidly approached with peace-time production operations. those brooklyn union boys are sure on their toes, or maybe its because carl wierum, industrial sales manager, is back from the war.

---

many restaurants feature special dishes, but andersens inn, buellton, calif, on the southern counties gas co. lines, tops anything we have heard about in years. in neon lights and large billboards they shout their specialty—split pea soup! m——good!

21,600,000 apple pies for the army! namankrum company, fresno, cal., made enough dehydrated apple nuggets during two war years to fill this many pies. gas supplied by pacific g. and e. co., furnished the heat for three large boilers, steam heat being used in the drying drums and vacuum driers. 98½ per cent of the moisture was removed from the apples.

---

speaking of dehydrated foods, did you hear the one about the sailors who had been fed so much dehydrated food that when the ship's doctor wanted a blood test, he would merely cut a vein and shake out some powder.

---

a. goodman and sons, the big matzoh and macaroni boys are moving their plant from n.y. to long island city where they will change over to gas for their baking ovens, having used other fuel at their former location.

---

did you know that a special kind of cake has to be baked when served with airplane meals? remember those nice light fluffy cakes that mom used to bake, well, take one up about twenty-thousand feet and see what happens to it. there just won't be any cake, it'll bust wide open from lowered pressure. a special mix and special baking are required to produce an article that will be the right texture when it's 'way up in the air.

---

j. p. leinroth, our industrial advertising committee chairman, has just been elected president of the cornell society of engineers. congratulations j.p.

happy new year!—a.q. s.

AMERICAN GAS ASSOCIATION

INDUSTRIAL AND COMMERCIAL GAS

ADVERTISING FOR JANUARY

GENERAL MANUFACTURING

One of the many advantages of *GAS* and Modern *GAS* Equipment—Economy.
Business Week (Jan. 12)

Revere Copper and Brass, Incorporated uses *GAS* extensively at the Halethorpe Extrusion Plant, Baltimore in magnesium and aluminum fabrication.
Modern Industry

One of the many advantages of *GAS* and Modern *GAS* Equipment—Speed.
Factory Management & Maintenance

With *GAS* ovens "uniformity of cores" and "production of good castings" are insured, says Bronze and Aluminum Foundry. **Industrial Heating**

METALS INDUSTRY

One of the many advantages of *GAS* and Modern *GAS* Equipment—Economy.
Foundry

Pioneer in heat treating for thirty years uses 47 *GAS* Furnaces for wide variety of metals conditioning.
The Iron Age (Jan. 3)

Revere Copper and Brass, Incorporated uses *GAS* extensively at the Halethorpe Extrusion Plant, Baltimore in magnesium and aluminum fabrication.
Metal Progress

A Man Well Worth Knowing—Your Local *GAS* Company's Industrial Engineer.
Materials and Methods
Steel (Jan. 7)

TECHNICAL COLLEGE PUBLICATIONS

GAS, our most versatile fuel, helped saw our way to Victory.
27 Engineering College Magazines

CERAMIC INDUSTRY

A Man Well Worth Knowing—Your Local *GAS* Company's Industrial Engineer.
Ceramic Industry

GLASS INDUSTRY

One of the many advantages of *GAS* and Modern *GAS* Equipment—Economy.
Glass Industry

CHEMICAL FIELD

For Control of Moisture during Production *GAS* is recommended.
Chemical & Metallurgical Engineering

One of the many advantages of *GAS* and Modern *GAS* Equipment—Economy.
Chemical and Engineering News (Jan. 10)

TEXTILE FIELD

One of the many advantages of *GAS* and Modern *GAS* Equipment—Economy.
Textile World

HOTEL AND RESTAURANT FIELD

Many advantages of *GAS* cooking stressed at Cleveland's Hotel Statler.
American Restaurant
Institutions

Here's Why the Trend is to *GAS* for all Commercial Cooking.
Restaurant Management

At Southern Tavern, Cleveland *GAS* Equipment Demonstrates its Flexibility and Functional Superiority. **Hotel Management**

SCHOOL FIELD

One of the many advantages of *GAS* and Modern *GAS* Equipment—Economy.
Nation's Schools

HOSPITAL FIELD

One of the many advantages of *GAS* and Modern *GAS* Equipment—Speed.
Modern Hospital

FOOD PROCESSING

One of the many advantages of *GAS* and Modern *GAS* Equipment—Economy.
Food Industries

BAKING FIELD

St. Moritz Hotel chooses *GAS* to bake its famous pastries.
Bakers' Helper (Jan. 26)

One of the many advantages of *GAS* and Modern *GAS* Equipment—Economy.
Bakers' Helper (Jan. 12)
Bakers Weekly (Jan. 7)

FOUNTAIN AND RESTAURANT FIELD

GAS cooks for the Union News Company's Restaurant in Grand Central Terminal, New York. **Chain Store Age** (Fountain-Restaurant Section)

NEWSPAPERS, PUBLISHERS, ETC.

One of the many advantages of *GAS* and Modern *GAS* Equipment—Speed.
Editor and Publisher (Dec. 15)

105 Year Old Brooklyn Eagle Finds *GAS* saves 74% in fuel costs—speeds operations 20% in stereotype room. **Editor and Publisher** (Jan. 12)

First All-Welded Holder in Mass.

BY RALPH C. BAUER
Utilization Engineer

AND WILLIAM R. STEVENS
Plant Superintendent

Pittsfield Coal Gas Co., Pittsfield, Mass.

THE first all-welded steel gas storage holder in Massachusetts has just been completed by the Stacey Manufacturing Company of Cincinnati, Ohio for the Pittsfield Coal Gas Company.

Prior to the foundation being laid for this holder it was found necessary to make borings of the earth at the proposed site. These soil tests proved that the ground water level was 20 feet below the ground surface and the pile company who made the borings recommended driving 341 concrete piles at an average depth of 22½ feet. It was deemed necessary to use steel shells for the protection of the concrete because of the pressures that would be created in driving the piles. A contract was made for driving these piles to an estimated aggregate footage of 7,673 linear feet.

It was necessary to secure authorization from the War Production Board to use 37 tons of carbon steel in the casings for piling and this authorization being approved, on September 22, 1944 the first shipment of steel casings or shells was delivered on the holder site.

Pile Foundation

The staking out of the location of these piles was the next step and was handled by our distribution engineer, Clarence Langdon. After the delivery and setting up of the pile-driving equipment, on September 27, 1944 the pile company drove the first pile. These piles were driven from a minimum depth of 17′ 6″ to a maximum of 26′ 3″ and measured 18″ across the top, and tapered to 8″ at the bottom. After a sufficient number of piles had been driven the casings were filled with concrete, which consisted of a 1-2-4 mix, the last pile being driven and poured on October 13, 1944.

After the concrete piles were driven, a re-inforced steel concrete foundation was placed on them. The diameter of the foundation was 112′ 6″. It was decided that this concrete foundation should be cast in one performance without stopping and the operation required approximately 600 yards of concrete, including the adjacent valve pit. The placing of the concrete was started in the early morning and finished about dark that evening. On November 6, 1944 the forms were removed from the rim of the re-inforced concrete foundation. Then a small amount of grading around the foundation was completed and a temporary roof built over the valve pit. Upon completion, this concrete foundation was allowed to stand all winter because the necessary steel entering into the construction of the holder had been allocated by the War Production Board for the first quarter of 1945.

The contractor secured the steel during the early part of 1945, fabricated it, and began to make shipments March 30, 1945. There were approximately 600 tons of material to be hauled from the railroad siding to the holder site, a distance of about 500 feet and at a hauling charge of $1.25 per ton. (The 600 tons includes all holder materials and erecting equipment hauled to the holder site and the erecting equipment hauled from the holder to the railroad track.)

The actual erection was started on May 29, 1945 with a crew of eleven men and completed on October 10, 1945. If it had not been for the unusually poor weather and labor conditions, the job would have been completed sooner.

The concrete foundation loadings are as follows:

1,950 lbs. per sq.ft. over entire bottom.
1,230 lbs. per lineal ft. of tank perimeter.
16,800 lbs. per rest block.
7,500 lbs. per shoe elbow supporting each elbow.

Holder Dimensions

The general dimensions of this 750,000 cu.ft. gas holder are as follows:

Steel Plate Tank—110′ 6″ in diameter and 31′ 0″ deep.
Inner Section Holder—103′ 11-25/32″ in diameter and 30′ 0″ deep.
Second Section Holder—106′ 1-15/64″ in diameter and 30′ 0″ deep.
Outer Section Holder—108′ 2-45/64″ in diameter and 30′ 0″ deep.
Working Capacity of three lifts—773,106 cubic feet.
All capacities are exclusive of space in the grip assemblies and in the crown above top curb.
Guide Frame consists of 12 steel I-beam standards or columns and 3 rows of steel channel girders.

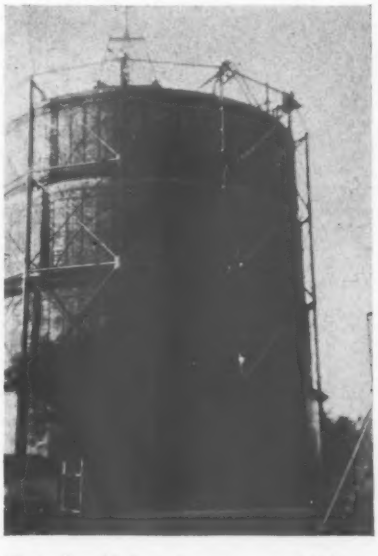
Here is a part of the steel tank specification for the bottom:

The bottom of the tank is made up of ¼″ thickness of steel rectangular plates, arranged for welding on the top side with continuous ¼″ fillet welds. The plates, forming the entire tank bottom, were laid on oil-treated sand 1½″ thick—10 gallons of oil to one yard of sand, furnished by the gas company. The outside or radial row consists of 5/16″ steel plates, approximately 48″ wide. The radial row was connected to the ¼″ thickness of bottom plates with ¼″ continuous fillet welds. The radial joints of the radial row plates were connected to each other with 60° V-butt welds. This radial row was securely attached to bottom curb angle of steel tank with ½″ continuous fillet welds.

Here is a part of the shell specification:

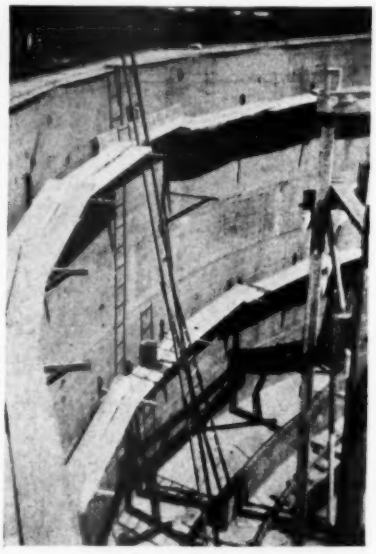
The tank shell is made up of 6 courses or rows of steel plates, 12 plates to each course. The vertical seams of each of the courses are V-butt jointed. The first and second courses of the shell were provided with double 60° V-butt joints and the remaining four courses with single 60° V-butt joints. All seams were back chipped before applying weld metal on the back side of plates.

The following exhibits the thicknesses and

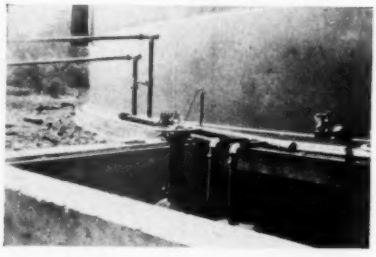


First all-welded steel gas storage holder in Massachusetts, recently completed for the Pittsfield Coal Gas Company

Reinforced steel concrete foundation and to right, piled on the foundation, is oil-treated sand ready to spread. On the left is located the covered holder drip and valve pit



Staging inside steel holder tank



Header sampling connection and Orsat testing equipment

types of welded joint, comprising the various courses or rows:

Row	*Thickness*	*Type of Joint*
1st	23/32″	60° Double V
2nd	19/32″	60° Double V
3rd	½″	60° Single V
4th	⅜″	60° Single V
5th	¼″	60° Single V
6th	5/16″	60° Single V

For testing, it was necessary for the gas company to purchase sufficient water to fill the tank, which holds approximately 2,000,000 gallons of water.

Pressures are as follows:

When the holder is fully inflated with air, the pressure thrown, shown upon a gauge in inches of water column, located at the outlet, will be about as follows:

Inner Section, alone	5.00 inches
Inner and Second Sections	7.75 inches
Inner, Second and Third Sections	10.13 inches

After completion of the lifts and the tank was filled with water, the holder was inflated with air and all welds were tested by the soap and water method for leaks.

In regard to the connections, there were provided two 24″ diameter steel riser pipes for installation inside of the steel tank, made of ⅜″ welded steel plate, and steel nozzles for connection to the underside of the tank bottom, steel elbows, horizontal pipes and steel drip pots.

The inlet riser pipe was provided with an elbow connection to divert the inflow of gas into the holder circumferentially away from the outlet riser pipe.

A heating system was provided for heating and circulating the water in the cups of the three sections and steel tank. The supply pipe leads into a loop pipe, consisting of 1½″ diameter steel pipe and 1¼″ steel pipe, and is supported on hangers on the back flange of I-beam columns.

The holder is to be painted two coats, which is included in the builder's contract. The first coat consisted of sublime blue lead in linseed oil, and a color of paint selected by the company for the second coat. The paint was not to be applied to the structure during freezing temperatures or when the surface to be painted is moist. However, the tank is being allowed to stand during this winter without painting because of excessive heavy mill scale and one coat has been applied to the structural work and the lifts.

An oil skimmer has been installed at additional expense to the purchaser. This equipment is composed of a 2′ 0″ diameter steel funnel and has a 2″ coupling connection for conveying pipe. The elevation of the funnel is such that oil can be skimmed with the outer and middle sections of the holder landed and the inner section lifted and throwing 5″ of pressure.

The gas company was required to provide the contractor with electric current of 3 phase, 60 cycles, 220 or 440 volts, for operating welding machines and air compressors utilized in the erection, including a plentiful supply of fresh water for drinking purposes and cooling compressors, which was piped to a temporary building. The cost of the water, electrical equipment and current amounted to more than $2,100.

Purging

While this gas holder was under construction, various purging methods were considered and we decided that the best method for us to use would be two portable gasoline-driven air compressors, following "The Procedure Recommended by the American Gas Association for the Purging of Gas Holders." The gas company had available one compressor, an Ingersoll-Rand single stage, powered by a four-cylinder motor, so we arranged to rent another compressor from a local contractor, which was a two-stage Worthington, powered by a six-cylinder motor. The rental charge on this unit was $1.50 per hour of use, which we considered reasonable.

We had to purge the holder, also two 20″ gas lines, having a total of 16,170 cubic feet of space made up as follows:

Holder with three lifts grounded—15,000 cubic feet.

540 feet of 20″ pipe—1,170 cubic feet.

A header was made from a piece of 4″ pipe 12 feet long. At one end we connected the two compressors, using one 2″ pipe from each unit to the 4″ header and from the other end of the header we made our connection to the drip on the 20″ inlet pipe to the holder, using two 2″ pipe connections. At the center of the 4″ pipe between the compressor connections and the holder connections was located a sampling cock. There were also sampling cocks on each of the 2″ lines from the compressors, plus a 2″ gate valve in case either unit had to be shut off.

In the crown of the holder there were located four 4″ I. P. S. openings—three around the outer circumference and one in the center. At the center outlet we located a 4″ valve, sampling cock and water column. At each of the openings around the outer circumference we located a 1½″ valve. These openings, plus two 2″ I. P. S. ones located in the top of the drip on the outlet pipes of the holder were utilized for venting during the purging operation.

Testing gases at one of the purge outlets with the J-W combustible gas indicator

Now that the vents were located and the compressors were connected, the compressors were started up and when the operating temperature was reached, adjustments were made to the carburetor so that the Orsat analysis of

the gas taken from the header with both units operating showed:

CO_2	8.2
O	.4
CO	5.2

Approximately 42% of the lower explosive limit.

The compressors were now shut off, filled with gas and oil and left ready to start the purging operation on Thursday, October 11, 1945.

The first inert gas was admitted to the holder at 7 A.M., on October 11, 1945 and both units operated continuously all day. No trouble was experienced and we maintained the above Orsat analysis within very close limits. A pressure of 1" water column was maintained during the purging operation and venting was alternated through the five vents.

At 4 P.M., the compressors were shut down so that we could check the gas and oil. We found that gasoline had been consumed at the rate of 3.85 gallons per hour. The compressors were again started and an Orsat analysis taken at the vents in the crown was as follows:

Center Outlet	CO_2	6.4
	O	2.6
	CO	3.4

Approximately 50% of the lower explosive limit.

The vents around the outer circumference showed a considerably lower oxygen content and we decided to run the compressors for another two hours and then close all vents and raise the lift. Before the lift started to rise the pressure had to be increased to 3¾" water column.

Before we left the holder for the night we placed approximately 49,000 cubic feet of inert gas in it. We marked one of the structural supports to see how much the inert gas might contract overnight, but found that it had expanded 1½" due to the morning sun. We believe that the amount the gas might have contracted at this time of the year would have been negligible.

We found that for the complete purging operation we used 73 gallons of gasoline:

23 gallons in the four cylinder compressor or 1.25 gallons per hour,
50 gallons in the six cylinder compressor or 2.6 gallons per hour,

showing that for this type of work it would be more practical to use six-cylinder motors if possible.

A 40-lb. air load was maintained on the compressors during the complete purging operation.

During the purging operation, arrangements were made with the gas works to supply gas to displace the inert gas in the holder on Friday, October 12, 1945.

On Friday, October 12, 1945 our first step was to open all vents and let out almost all of the inert gas. When the lift was only 4" from grounding, we closed all vents and raised the lift again with manufactured gas; then opened the vents in the crown and let it down again. This cleared a good large portion of the inert gas out of the holder. Now the vents were closed and manufactured gas was again admitted to the holder; then one vent at a time was opened and the gas tested with a J-W combustible gas indicator until we had a reading indicating clear gas. We tested the gas in the holder with the combustible gas indicator for several days and found that the vent on the outlet drip would have to be blown each day until finally all vents gave the same reading. The first gas from the holder entered the distribution system on October 31, 1945.

We feel that this method of purging is very practical for the smaller gas company or the smaller emergency job—where the length of time for a given purging operation does not have to be too short.

Technical Reports on Natural Gas Condensates, Hydrogenation of Coal Available

TWO products of the work of the A. G. A. Technical Section's Postwar Planning Cooperating Committee, T. L. Robey, Washington Gas Light Co., chairman, have just been published by the American Gas Association. Prepared by the Institute of Gas Technology, the first is entitled "The Utilization of Natural Gas Condensates" and the second, "The Hydrogenation of Coal and the Fischer-Tropsch Process and the Utilization of Off-Peak Gas Capacity.

The report on the utilization of natural gas condensates includes a survey of the availability of the LP gases, propane and butane. It describes LP air gas plants and undiluted LP gas plants that have been installed in smaller communities and quotes from investment and production costs for LP gas plants in specific locations. A section of the pamphlet is devoted to gas air mixtures for supplementing gas production during peak loads in natural, mixed, or manufactured gas properties.

The last part of the report is devoted to the utilization of gas, hydrocarbon gases as a manufactured material either for enriching, reforming in water gas plants, or as a material for catalytic reforming with catalysts.

The report on the hydrogenation of coal and the Fischer-Tropsch process includes published information regarding the work at Leeds University in England on the production of methane from hydrogen and coal and the work at Purdue University using hydrogen at high pressure to react with carbon to produce methane as well as the better known Bergius process.

The second section is a review of published information on the Fischer-Tropsch process for the production of hydrocarbon oils from blue gas.

The last section consists of a summary of suggestions for the utilization of spare water gas equipment. The probabilities of using equipment in this way appear to be remote because of the investment required for additional equipment.

Both reports in printed form are available at a price of $1.00 each per copy. Orders should be addressed to the American Gas Association, 420 Lexington Ave., New York 17, N. Y.

Koppers Sales Manager

DR. WALTER C. RUECKEL, general superintendent of operations, Koppers Company, Inc., Engineering and Construction Division, has been appointed New York district sales manager of the division with headquarters in the New York offices of the company, 60 E. 42nd Street, it is announced by Joseph Becker, vice-president of Koppers. Dr. Rueckel has been with Koppers since 1938.

Elliott Preston has been appointed general superintendent of operations to succeed Dr. Rueckel. He formerly was assistant general superintendent and has been with Koppers since 1924.

Buyers' Group Meeting

THE Public Utility Buyers' Group of the National Association of Purchasing Agents will hold a midwinter convention at the Edgewater Hotel in Chicago, Illinois, on February 4-5.

The program has been planned to be of interest to both purchasing agents and storekeepers from gas, electric and street railway utilities. Representatives from the major manufacturing companies will give their opinion on the labor and productive capacity situation. Executive Secretary-Treasurer George A. Renard will present his views on pertinent problems and will give some hints on making use of the huge government surpluses. Industry men will discuss automotive equipment, poles and crossarms, and other subjects.

If you have not received an invitation to attend this meeting, notify C. F. Ogden, The Detroit Edison Company, 2000 Second Avenue, Detroit 26, Michigan, and also arrange to make reservations immediately with the Edgewater Beach Hotel in Chicago.

Synthetic Fuels Plant

SECRETARY of the Interior Harold L. Ickes announced Nov. 26 that the Bureau of Mines will take over the Missouri Ordnance Works, near Louisiana, Mo., a plant that made synthetic ammonia during the war, and convert it into a demonstration plant for the production of gasoline and oil from coal and lignite.

An agreement with the War Department whereby the $17,500,000 plant will be transferred to the Interior Department for reconversion as a synthetic liquid fuels demonstration plant has just been concluded.

GEORGE E. WHITWELL, Chairman R. M. CONNER, Director W. H. VOGAN, Pacific Coast Supervisor

Laboratories' Expansion Program

Restored exterior of American Gas Association's Cleveland Laboratories

BY H. J. HENSE

American Gas Association Testing Laboratories

INAUGURATION by the American Gas Association Testing Laboratories of a long-range expansion program designed to meet both the immediate needs of operations and the increasing requirements of the future has been officially authorized by the Laboratories' Managing Committee. First phases of the expansion have already been undertaken and others are under way.

The new program is based upon a conservative forecast of the expected demands for services upon the Laboratories. Additional facilities have been provided for handling a large increase in testing operations coincident with continued growth of research activities.

An initial step in these expansion plans is the enlarging of testing facilities to their prewar size in order that manufacturers seeking speedy testing of new postwar appliances may be adequately served.

The second move is the provision of additional floor space to provide for the time when the now increasing volume of test work together with accelerated research activities no longer can be accommodated in the present Cleveland Building. Real estate has been acquired adjoining the present building and two of four frame structures presently occupying the new site are to be remodeled at once to provide needed additional space. The new site will not only fill present needs but will make possible construction of a contemplated new wing to the Laboratories.

Likewise, additional gas storage capacity is to be provided and new scientific instruments and equipment secured for both testing and research purposes. The technical staff of the Laboratories has already been materially increased in order that qualified engineers will be available at all times. Further personnel will be added as required.

The complete expansion program calls for appropriate step by step matching of Laboratories' facilities and manpower with increasing demands. At present testing operations are running at a level substantially half the normal pre-war rate. This estimate is based on the record of pre-war operations which reached a total of approximately 3,000 appliances and accessories tested annually. It is expected that this level will again be reached during 1946 and that it will exceed that figure substantially during 1947.

Present needs for additional testing space have been met by reconverting approximately 3,000 square feet of floor space to appliance testing purposes. The central heating and water heating test rooms, combined during the war years, again have been separated into their own quarters. Likewise space heater testing and appliance description activities have been divorced and set up as separate entities. The machine shop has been enlarged in order to give manufacturers better facilities for making changes in equipment, and

Expanded Central Heating Section is currently testing a large volume of postwar gas equipment

Water Heater Test Section re-established in space formerly devoted to Laboratories' war services

New quarters for the Appliance Description and Drafting Section

accessory testing space has been relieved of miscellaneous operations which it formerly housed under war necessity.

New scientific equipment and instruments purchased as part of the expansion program will make possible more efficient and effective use of expanded floor space and eliminate delays due to duplicate use of the same equipment for several activities. Proposed additional equipment, some of which is already on hand, includes a number of new gas meters, eight additional gas stations in the research department, electronic temperature indicator, portable carbon monoxide recorder, new calorimeter, specific gravity indicator, three air-gas ratio analyzers, five indicating potentiometers, and a refrigeration unit for closed room research. New wall and floor temperature testing panels are also under construction by staff members for both the Cleveland and Los Angeles Laboratories.

Additional gas storage capacity is made necessary not only by the rapid increase in testing and research activities but because a new test gas known as mixed gas, used for gas appliance approvals, has been added during the past several years.

As part of remodeling operations rearrangement and extension of the Laboratories' air conditioning equipment will be undertaken. A greater section of the Laboratories will be air conditioned not only to promte staff efficiency but to set an example in the use of modern, gas-fired all-weather equipment and its benefits.

Together with the restoration and rehabilitation of the Cleveland building which was accomplished during the past year, the development of the expansion plan places the Laboratories in an excellent position to carry out the many activities entrusted to them both in the research and testing field.

Canaday and Sanders Get New Posts

PAUL O. CANADAY has been appointed vice-president and Harold F. Sanders secretary-treasurer of Electric Power & Light Corporation, it was announced in December by Edgar H. Dixon, president.

Mr. Canaday was formerly treasurer and assistant secretary of Electric Power & Light Corporation, a holding company of the Electric Bond and Share system. He has been associated with system companies almost continuously since 1926.

Mr. Sanders joined Electric Bond and Share Company in 1921, becoming assistant to the secretary-treasurer of Electric Power & Light in 1937. He was appointed secretary in 1944 and continued in this position until his present appointment as secretary-treasurer.

Brunston Superintendent

G. F. BRUNSTON has been promoted from assistant general superintendent and chief engineer of the Colorado Interstate Gas Co., Colorado Springs, to general superintendent, it has been announced by Robert W. Hendee, president. He succeeds John P. McClintock who died November 27.

The post of chief engineer has been filled by C. B. Abbott.

Welsbach Agent

FRED O. PAIGE has been appointed purchasing agent of Welsbach Engineering and Management Corporation, Philadelphia, and all its subsidiaries, effective December 3, according to an announcement by Morse DellPlain, president.

Mr. Paige, formerly executive assistant, has replaced John F. McGough, promoted to the new business department of the street lighting and construction companies of the Welsbach group as special representative.

F. P. C. Elects Commissioner Olds Chairman

THE Federal Power Commission at its meeting Dec. 14 unanimously elected Commissioner Leland Olds of New York as its chairman for the remainder of his present appointment which expires June 22, 1949.

The Commission also unanimously elected Commissioner Nelson Lee Smith of New Hampshire its vice-chairman for the remainder of 1945 and for the calendar year 1946.

Chairman Olds was first appointed a member of the Federal Power Commission in June 1939 and was reappointed in 1944. He served as chairman of the Commission from January 1940 to June 1944, and since September 1944 has served as vice-chairman. In resuming his duties as chairman, Mr. Olds succeeds former Commissioner Basil Manly, who resigned as chairman and member of the Commission on October 1, 1945 to enter private business.

Personal and Otherwise

Reappointed Chairman of Rate Committee

L. R. Lefferson

L. R. LEFFERSON, head of the Rate Department of Ebasco Services Incorporated, New York, N. Y. has been reappointed Chairman of the Rate Committee of the American Gas Association by its President, Everett J. Boothby.

Mr. Lefferson has long been active as a rate engineer in the affairs of the Association. He served as a member of the A. G. A. Rate Fundamentals Committee until it was discontinued in 1935; since 1939 he has been a member of the Rate Committee and was appointed its chairman last year. He is an outstanding authority in the field of rate engineering.

The Rate Committee will continue its studies of subjects considered during the past year plus others that may be timely.

Heads New Rochester Architects' Bureau

Larry Fridley

APPOINTMENT of Larry Fridley, Rochester Army captain recently discharged after three and one-half years of service, to head a new Architects' and Builders' Bureau at Rochester Gas and Electric Company, has been announced by Vice-President Robert E. Ginna.

Captain Fridley is a graduate architect and under his direction the new bureau will offer advice and assistance to the building profession in connection with the uses of gas and electricity in the new homes to be constructed, particularly in regard to modern kitchen planning, remodeling, ventilation, heating and air conditioning. The new bureau will be located in the company's East Avenue Building.

R. W. Gallagher Resigns As Standard Chairman

R. W. Gallagher

RALPH W. GALLAGER has resigned as chairman of the board of Standard Oil Co. of New Jersey, effective December 31, 1945, thus bringing to a close an outstanding business career of 49 years with Standard and its affiliates. During much of this time, he was prominent in gas industry activities and served as president of the American Gas Association in 1932. He was one of the principal speakers at the Association's annual meeting in New York last October.

Frank W. Abrams, a vice-president and director, was elected board chairman to succeed Mr. Gallagher. Eugene Holman, president, succeeds Mr. Gallagher as chairman of the Executive Committee, and J. R. Suman, vice-president and director, became a member of the Executive Committee. R. T. Haslam, a director since 1942, was elected a vice-president and S. P. Coleman, head of the economics and coordination department, was elected a director.

Appliance Manufacturers Appoint Massey

Harold Massey

HAROLD MASSEY has been appointed assistant managing director of the Gas Appliance Manufacturers Association, H. Leigh Whitelaw, managing director, has announced.

Mr. Massey was formerly associated with the American Radiator and Standard Sanitary Corporation in the sales, advertising, engineering, and design of automatic gas water heaters, boilers, furnaces, conditioners, and conversion house heating burners.

From 1923 to 1930 Mr. Massey was chief engineer of the Standard Gas Equipment Corporation, where he was active in the development and production of domestic, commercial, and industrial cooking equipment and industrial gas burners.

Mr. Massey graduated from Stevens Institute of Technology in 1923 and brings to the Association wide experience in the design, sales, and sales promotion of all types of gas equipment. He is widely known throughout the gas industry and has served on many committees of both the American Gas Association and the Gas Appliance Manufacturers Association. He has also served on many Government Industry Advisory Committees.

The appointment of Mr. Massey is in line with the Association's expanding program of assisting utilities and dealers in the promotion of gas as a fuel and of capitalizing on the increasing markets for gas appliances and gas equipment.

Public Relations Executive Changes

Robert A. Zachary

ANNOUNCEMENT is made by President George H. Blake, of Public Service Electric and Gas Co., of New Jersey of the following organizational changes in the company's publicity and advertising department in connection with the retirement of Walter Fox Allen as director of publicity:

Robert A. Zachary, vice-president in charge of public relations, will head the publicity and advertising department.

Joseph A. Gallagher is named director of publicity.

Thomas H. Spain is named director of advertising.

S. Earle Clauss will be assistant director of publicity.

Joseph A. Gallagher

Mr. Zachary has been vice-president for the past six years, a director of the subsidiary companies since 1941, and has been associated with Public Service since 1930.

Publicity manager since 1942, Mr. Gallagher has been in the Publicity Department of Public Service twenty-one years. Prior to that he was a reporter and later sports editor for the *Plainfield Courier-News* and also worked for the *Newark Sunday Call.*

Thomas H. Spain

Mr. Spain has been with Public Service since 1927 and for the past eight years has been advertising manager. He is currently a member of the A. G. A. National Advertising Copy Committee. He is also a director and past president of the Public Utilities Advertising Association.

S. Earle Clauss, was a reporter with the *Bergen Evening Record,* Hackensack, for eight years prior to becoming a publicity assistant in the Publicity Department of Public Service in 1937.

Little Heads A. G. A. Heating Group

Ray Little

RAY LITTLE, general sales manager of the Equitable Gas Company, Pittsburgh, has been appointed chairman of the House Heating and Air Conditioning Committee, Residential Gas Section, American Gas Association.

Mr. Little has been active in American Gas Association work for a number of years, and has served the Association as chairman of Architects' and Builders' Service Committee, member of A. G. A. Laboratory Subcommittee on Space Heating Requirements, and member of Subcommittee on "CP" Heating Requirements. At present, he represents the Association on the Weather Statistics Committee sponsored by the National District Heating Association.

Law Elected to A. G. A. Advertising Committee

CLARENCE L. LAW, vice-president, Consolidated Edison Company of New York, has been elected a member of the Committee on National Advertising of the American Gas Association, according to D. P. Hartson, chairman.

Mr. Law will represent participating companies in the Metropolitan New York area.

Personnel Committee Chairman Named

Fred R. Rauch

APPOINTMENT of Fred R. Rauch, director of industrial relations, Cincinnati Gas & Electric Co., as chairman of the Personnel Committee of the American Gas Association has been announced by President Everett J. Boothby.

Mr. Rauch is a registered professional engineer with twenty-five years' experience in the construction of many types of industrial, commercial and public works structures such as buildings, bridges, roads, dams, airports and flood control projects in the United States, Hawaii, Puerto Rico and the Virgin Islands. This required the employment of substantially all types of unskilled, skilled, professional and technical personnel and relations with labor organizations of many types.

He was employed by the Federal Government for eight years in engineering, labor relations and executive positions. Mr. Rauch was also a member of the original Labor Management Committee of the Office of Production Management. He is a member of the Industrial Relations Committee of the Edison Electric Institute, and of the American Management Association.

The Personnel Committee of the American Gas Association is engaged in a continuous study of industrial relations problems and is in its tenth year as an Association activity.

Pennsylvania Gas Men Honor Forward

AT a meeting of the council of the Pennsylvania Gas Association, held on December 14, 1945, the following resolution was adopted unanimously:

"The Pennsylvania Gas Association having been informed of the retirement of Major Alexander Forward after twenty-two years as managing director of the American Gas Association, wishes to add its expression of appreciation and goodwill to the numerous others of a similar nature that he has so deservedly received.

"Major Forward has taken an important part in advancing the interests of the gas industry in this country. We in Pennsylvania are particularly indebted to him for his inspiration and leadership; and for the many words of encouragement and counsel extended to us, particularly at our annual conventions, at which he has been our principal speaker and guest of honor on many occasions.

"The Pennsylvania Gas Association is conscious of a sense of loss upon the disassociation of Major Forward from active leadership in the affairs of the gas industry. We congratulate him, however, on his courage in taking this step and send to him our best wishes for many happy and fruitful years in retirement, a privilege he has so richly earned."

Brooklyn Union Gas Executive Changes

EFFECTIVE December 1, The Brooklyn Union Gas Company announced the following changes in its executive personnel, except for those now in the armed services or on wartime leave:

Richard B. Loomis, from secretary to secretary and assistant vice-president.

Glen E. Foster, from comptroller to assistant vice-president.

Walter E. Bolte, from manager, new business to assistant vice-president.

John E. Heyke, from assistant personnel director to assistant vice-president.

Morton O. Davis, from assistant treasurer to treasurer.

Ansel B. Huyck, from engineer of manufacture to assistant chief engineer.

Samuel Green, from assistant engineer of manufacture to engineer of manufacture.

A. Dudley Harrison, from assistant general superintendent, Greenpoint Works, to assistant engineer of manufacture.

Winston E. Himsworth, from acting assistant personnel director to industrial relations director.

John J. Garland, from assistant chief engineer to administrative personnel director.

Wilfred H. Weber, from assistant engineer of distribution to manager, customer service.

James J. Deely, from acting manager, new business to manager, new business.

William B. Hewson, from acting manager, publicity and advertising to manager, publicity and advertising.

William P. Wallace, from engineer's assistant to assistant engineer of distribution.

Leonard F. Genz, from supervisor, apartment house division to assistant secretary.

John A. Paterson, from assistant comptroller to comptroller.

Reinhold H. Johnson, appointed assistant comptroller.

Herman Karl Merker, from assistant superintendent to general superintendent, Greenpoint Works.

Russell P. Shaffer, from assistant superintendent to assistant general superintendent, Greenpoint Works.

Allen G. Hall, from superintendent's assistant to assistant superintendent, Citizens Works.

Mr. Bolte and Mr. Genz are still on wartime leave and military leave, respectively while Mr. Davis' new position becomes effective on Treasurer Thomas P. Payne's retirement on December 31, 1945.

The new titles indicate either a continuation of old functions or are designated to cover new responsibilities. Among those with new responsibilities are Assistant Vice-President George F. B. Owens, who on his return from Naval Service will supervise the new Customer Service Department which will have as its manager, Wilfred H. Weber. Walter E. Bolte will supervise the Commercial Department, the New Business Department and the newly created Publicity and Advertising Department, which will be managed by William B. Hewson. Glen E. Foster will have supervision over the Accounting and Auditing Departments and the company's rate making and statistical functions.

John E. Heyke's new duties call for him to supervise all personnel and labor relations matters. Ansel B. Huyck in his new position will be responsible for the Manufacturing, Distribution, Construction and Laboratory Departments. Reinhold H. Johnson joins Brooklyn Union after serving in the U. S. Army. He was formerly associated with Arthur Andersen & Co.

Russell Gets 40-Year Pin

President Herman Russell (left) of Rochester Gas and Electric Corporation at Rochester, N. Y., receives a 40-year service pin from Chairman of the Board Edward G. Miner. Mr. Russell went to the Rochester utility as a gas engineer in November 1905 and has been president since 1929. He served as president of the American Gas Association in 1936-37

Stack A. G. A. Director

ALVIN H. STACK, president, Tampa Gas Company, Tampa, Fla., has been elected a director of the American Gas Association, to fill a vacancy caused by the election of Hudson W. Reed, president, Philadelphia Gas Works Company, Philadelphia, Pa., as vice-president of the Association, it was announced by Everett J. Boothby, president of the A. G. A.

Brooklyn Employees Win Service Awards

NEARLY one-third of The Brooklyn Union Gas Company's 3,477 employees have been with the company a quarter century or more, President Clifford E. Paige observed Nov. 29 in presenting Service Emblems to the first of 251 veterans who in the past year observed service anniversaries of 25, 30, 35 and up to 65 years. Mr. Paige said that the company now has 1,110 names on its honor roll of employees with 25 or more years' service.

Among those singled out for special honors were four employees who in 1945 rounded out a half century of service. Each received from President Paige a check for a year's salary in addition to the customary gold emblem.

The 50-year men included Thomas P. Payne, the company's Treasurer, who entered Brooklyn Union as an office boy back in 1895 and whose rise paralleled that of the company he so faithfully served. Sharing honors with Mr. Payne were John D. Jennings, still active as custodian of records in Central Stores; Daniel P. Coakley, formerly an inspector in Nassau Branch, now retired; and Lawrence Shine, who at the time of his retirement on pension in 1932 was assistant general foreman in the old Williamsburgh Works.

Oldest in point of service among this year's emblem recipients was Robert J. Campbell, who on April 6 celebrated his 65th service anniversary. Mr. Campbell, formerly assistant foreman in the old Fulton Works, has been retired on pension since 1918.

Brown Heads Finance and Control Committee

JAMES A. BROWN, vice-president, Commonwealth & Southern Corporation, has been elected chairman of the important Finance and Control Committee, which supervises all expenditures of the American Gas Association. Other members of the committee elected were: Frank H. Lerch, Jr., president, Consolidated Natural Gas Co.; R. E. Ramsay, president, New Haven Gas Light Co.; Paul R. Taylor, vice-president, Consolidated Electric & Gas Co.; and P. S. Young, chairman of the Executive Committee, Public Service Electric & Gas Co. Ex-officio members of the committee are Everett J. Boothby, R. H. Hargrove, and Hudson W. Reed, president and vice-presidents, respectively, of the American Gas Association, and Ernest R. Acker, president, Central Hudson Gas Co., who is chairman of the Association's Committee on Research and Promotional Plan.

Stacey Appointment

Wm. E. Mikolasy

APPOINTMENT of William E. Mikolasy as eastern sales representative of the Stacey Brothers Gas Construction Company, Cincinnati, has been announced by A. E. Harvey, vice-president.

A graduate of the University of Kentucky, Mr. Mikolasy was previously connected with the M. W. Kellog Company in New York and has recently been released from the USAAF, where he was a Lieutenant with three years' overseas service to his credit.

Mr. Mikolasy will make his headquarters in the New York office at the Chanin Building.

Tucker Vice-President

AT a recent meeting of the board of directors, Edward J. Tucker, general manager of The Consumers' Gas Company of Toronto, was elected vice-president of the company to succeed Colonel John F. Michie, who resigned from that office but continues as a director. Mr. Tucker is a director of the American Gas Association and has been active in A. G. A. affairs for many years.

Promotion Manager For Equitable Gas

Major Givan

MAJOR HENRY C. GIVAN, now on terminal leave from the USAAF, has been appointed sales promotion manager, Equitable Gas Company, it has been announced by Ray Little, general sales manager of the company. Major Givan will handle all matters pertaining to sales promotion on base load appliances and heating units, as well as dealer relations and cooperation.

A graduate of Cornell University in 1926, Major Givan entered the employ of the Equitable Gas Company in 1926, and has served as engineer of tests, heating sales engineer, supervisor of heating sales, Equitable Gas Company; supervisor of refrigeration and radio sales, Equitable Sales Company; and supervisor of trade development, the position he held at the time he entered active military service.

Gueffroy Elected Vice-President

C. H. Gueffroy

ELECTION of C. H. Gueffroy as a vice-president of Portland (Oregon) Gas and Coke Company, to have charge of by-products sales and market investigations, rate and regulatory matters, budgets, financial studies and related activities, is announced by Paul B. McKee, president.

Mr. Gueffroy has been with the company since 1919, joining the organization shortly after his release from army service during World War 1. For the past twelve years he has served as assistant to the president.

Baird Moves Up

GEORGE BAIRD has been advanced from treasurer to executive vice-president of the Southwestern Development Company, it was announced December 19 by P. C. Spencer, president. Mr. Baird has been active in the American Gas Association and has rendered valuable service recently as a member of the Committee on Development and Use of Gas Industry Statistics.

J. S. Shearer has been elected treasurer, succeeding Mr. Baird in that position. W. M. Costelloe has been appointed assistant secretary and assistant treasurer to succeed E. A. Sickels, resigned.

Joins Surface

APPOINTMENT of George D. Yeazel as factory sales representative at Kansas City, Missouri, was recently announced by C. B. Phillips, vice-president of Surface Combustion Corporation, Toledo, Ohio.

Obituary

Louis C. Smith

LOUIS C. SMITH, sixty, president of the Harrisburg Gas Company since 1935, died December 27 of a heart ailment.

Prior to heading the Harrisburg utility, Mr. Smith was assistant managing director of the American Gas Association and he continued an active interest in the A. G. A. until the time of his death. He was also prominent in Pennsylvania Gas Association affairs and held the presidency of that organization this year.

A native of Philadelphia, Mr. Smith was graduated from the University of Pennsylvania, department of mechanical engineering, in 1907.

Entering the utility field in 1908 he started with the United Gas Improvement Company in Philadelphia. Later he was employed by the Omaha Gas Company, Omaha; was president of the Fulton County Gas & Electric Company, Gloversville, N. Y., and was vice-president of the New York Power & Light Corporation, Schenectady, N. Y., before going to Harrisburg.

SAMUEL LLOYD DAVIS, 48, financial director of United Gas Corporation and associated companies, Shreveport, Louisiana, was fatally stricken by a heart attack December 6, in New York City where he had been for several days on business. Mr. Davis was a director and comptroller of United Gas Pipe Line Company and Union Producing Company and was treasurer of United Gas Corporation.

Well known in American Gas Association circles, Mr. Davis has served on various committees in the Association during the past ten years, among which were the Committee on Depreciation Accounting and the Managing and Advisory Committee.

Mr. Davis was born in Earlville, Illinois, April 10, 1897. He received his education in Wichita, Kansas, later serving with the Army in World War I. His business career began with the Kansas Gas and Electric Company at Wichita. In 1924 he became associated with Electric Bond and Share Company in New York, later serving as treasurer of its subsidiary, Louisiana Power and Light Company, in New Orleans. Mr. Davis became connected with United Gas in April, 1932, and moved to Shreveport when the head offices of the companies were established there in 1940.

News of his sudden and untimely death came as a profound shock to his many friends and associates. Mr. Davis was well known in Shreveport for his many civic activities, and, at the time of his passing, was on the board of directors of the Boy Scouts in that city. He was also a member of several Masonic bodies, among them the Wichita Consistory No. 2 of the Scottish Rite and the Midian Temple of the Shrine in Wichita.

He is survived by his wife and three sons, Lieutenant Virgil R. Davis, in the army at Rupert, Idaho; Sergeant Samuel L. Davis, Jr., of Williams Field, Arizona; and Nelse A. Davis, in school at St. Louis, Missouri; one sister, Doris A. Davis of Wichita, Kansas, and a brother, M. S. Davis, also of Wichita.

Funeral services were held in Shreveport, Sunday, December 9. Pallbearers were R. A. Reeder, F. E. Waltrip, I. M. Avent, L. V. Tracht, J. H. Miracle, R. E. Hull, A. L. McClellan, and J. C. Wright. Interment was in Forest Park Cemetery at Shreveport.

JOHN PAUL McCLINTOCK, general superintendent of Colorado Interstate Gas Company, Colorado Springs, died November 27. He was born May 18, 1882, in Harrisville, Butler County, Pennsylvania.

Starting as a civil engineer, Mr. McClintock worked for the South Penn Oil Company and for the Hope Natural Gas Company in Clarksburg, West Virginia. He became associated with Colorado Interstate Gas Company in 1927, to supervise the construction of that company's pipeline transmission system and later became general superintendent.

GET A LOAD OF THIS!

(Continued from page 35)

thusiasm. And, when you arrive at that point, have a plan that will encourage the owner to talk about his water heater and to report to you the people he finds to be interested.

A simple plan here pays big dividends.

And so we come to another section of our fence—No. 8 in our Ten to One Program—and we're well on our way to fencing Mr. Prospect in.

This one is the *Dealer,* a mighty important force *for* you or *against* you. Remember, the competition is after him and after him strong, so win him to your side quickly and keep him there. Whether your company merchandises or not the dealer is a key man in building this Ten to One Fence. If he works with you, he'll be a big help in keeping those hot water faucets open *one* more minute a day, *many* times a day, and he'll be a big help in adding new hot water faucets to your gas network.

8. THE DEALER

Sell Him
Have a Plan
Help Him

Use all the facts and figures you have to prove to the dealer that his customer will profit more and he will profit more if he pushes automatic gas water heaters. Make it easier for him to sell gas water heaters and he'll sell them in preference to other, slower-moving merchandise. Don't spare the horses; keep them working until you have a sales story that sells the dealer and keeps him sold.

Have a plan that ties in the gas company with his everyday selling and, above all, give him help—as much as you can and as often as you can.

Anyhow, we're on the home stretch and No. 9 in our Ten to One program is the *Architect and Builders,* representing the new house and remodeling market, forecast to be the biggest in our country's history.

Now, it's very certain that if we are to get increased load from busy hot water faucets, we must have those faucets connected to automatic gas water heaters and the very best time to accomplish this is when the house is built or remodeled.

9. THE ARCHITECT AND BUILDER

Facts
Package Mortgages
Customer Satisfaction
Contact

Make sure in your own program that the architect and builder will have all the facts about the new hot water demands and why they are best met by an automatic gas water heater. See that he knows about the hot water "bottle-necks" and the importance of anticipating increased hot water requirements as *time marches on.*

He may know something of package mortgages, but present the story from the viewpoint of the water heater. Emphasize the need of a water heater of right size and recovery rate and the importance of a water heater that will last for many years.

And, finally, set up a regular schedule of contact by people who can explain the gas story in the language of the architect and builder. See them early and often; be prepared to provide technical information quickly.

And now—the tenth and final section of our fence is *Advertising and Promotion.*

With these two powerful sales instruments, you multiply the power of all the other nine sections in the Ten to One fence. With advertising and promotion, you can build a whole or partial acceptance of your story in the prospect's mind before your salesmen, your employee, your home service worker, your dealer, your architect, or builder, go to work on Mr. Prospect.

10. ADVERTISING AND PROMOTION

How Much
Made-to-measure
Consistent
National Tie-ups
Merchandise It

Your first natural question is, "How much

advertising and promotion should we do?" And the answer is, "As much as you can afford." Expense, of course, should be kept in line with sales, but it's better to be a bit on the liberal side than on the conservative side. Above all, don't subscribe to the theory that the easiest way to save money is to cut down on advertising.

Make your advertising fit you and the personality of your company. Be consistent. The time to advertise is all the time, perhaps more in one season than in another, but with a twelve-month consistency, so your public will never forget the advantages of automatic gas-heated water.

If you sell a nationally-advertised line, identify yourself with it. Use the nationally-advertised name in your own advertising.

And when you have a real advertising and promotion campaign moving along in good style, merchandise it. Merchandise it to your boss; he'll take more interest in it if you do. Merchandise it to your manufacturers; it'll encourage them to spend more money, perhaps. Merchandise it to your salesmen; they all want to ride with a winner and they like to sell an appliance that is known to their prospects. Merchandise it to the Home Service Department, to the general employee, to the dealer and the architect and builder.

By merchandising the advertising, I mean that you should *tell* these people about your advertising; tell them in person, in your meetings and in your printed matter. Make them feel that your advertising and promotion is working for them, then they'll work harder for you. That's been proven thousands of times.

There's the Ten to One fence, and I believe you'll agree with me that Mr. Prospect is now really and truly fenced in—that the fence is really tight and that he can't get away.

That's the story. Use these ten agencies—some inside your organization and some outside your organization. Tie them together to one object—to sell *a* prospect *a* water heater—and you *can't miss*. It's a sure sale every time. The result—more faucets connected to gas water heaters, and busier faucets, faucets that will return you 3570 B.t.u. for every extra minute you keep one open.

And how about Mr. Hard-boiled Prospect? Did he get a load of this? He did and is now the proud owner of an automatic gas water heater.

UTILIZATION OF NATURAL GAS

(Continued from page 13)

has been prompted by the desire to find new and replaceable resources of liquid fuels for the internal combustion engine.

The Government research program in petroleum should be expanded since it is obvious that the result of such research will find earlier application and thereby serve to prolong the life of our petroleum reserves; and to such an extent serves the same purpose as research work on the conversion of agricultural products and coal which, by all means, should be continued. However, it may come as a surprise to some that for at least the next 20 years the petroleum and natural gas industries will in all probability be the primary beneficiary of any such research work on conversion of coal and agricultural products for the reason that these industries will undoubtedly be able to more economically utilize a greater portion of the results of such research in the manufacture of more and better fuels and lubricants.

BIBLIOGRAPHY

1. Data published by American Petroleum Institute.
2. "Estimate of U. S. Gas Reserves," Statement of E. DeGolyer to Senate Committee on Investigation of Petroleum in Relation to the National Welfare, Washington, D. C.
3. "Minerals Yearbook," United States Department of Interior, Bureau of Mines, 1937 to 1943, inclusive.
4. "Monthly Summary of Gas Company Statistics, "by the Statistical Bureau of the American Gas Association, April 1945.
5. Annual Statistics of the Natural Gas Utility Industry in 1944. AGA Statistical Bulletin No. 59, October 1945.
6. "Synthetic Organic Chemicals," Chem. & Met. Eng. Volume 52, No. 2, Page 130, February 1945.
7. "Synthetic Liquid Fuels." Hearings before a Subcommittee on Public Lands and Surveys, United States Senate, Seventy-Eighth Congress, First Session on S. 1243, U. S. GPO Washington, D. C. 1944.
8. "Our Natural Gas Reserves" by Lyon F. Terry, Natural Gas Spring Conference, AGA, French Lick Springs, Ind., May 12, 1944.

ACCOUNTANTS MAKE PLANS FOR 1946

(Continued from page 33)

No subcommittees to undertake specific projects were appointed, but it was voted to hold four meetings annually. Also it was proposed that a tax paper of general interest would be prepared for presentation to the tax committees at the Spring Conference.

The above summarizes the work to be undertaken by the regular standing committees of the Section. In addition, it is expected that the special committee under the Chairmanship of L. A. Mayo, Connecticut Light and Power Company, on which representatives of both the A. G. A. and E.E.I. are serving and which has been making an extensive and thorough study of all customer activities, practices and procedures, will soon be in a position to release the valuable and pertinent information that has been secured and summarized from a questionnaire covering all customer activities' phases.

The Committee Chairmen, Group Coordinators and Section Officers whose pictures accompany this article are deeply appreciative of the enthusiastic and sincere cooperation being extended by the members of the A. G. A. Accounting Section and the E.E.I. Accounting Division who are serving on the various committees and who are giving so unselfishly of their time and efforts to making the forthcoming Spring Conference a success.

SERVICES OFFERED

Distribution Engineer and pipe line supt. Navy dischargee. 15 years' experience manufactured gas distribution, high and low pressure, regulation, design and cost work. Some technical education, 38—married. **1504.**

Gas Engineer Mechanical Engineering Graduate. Available after January. Three years with the U. S. Navy as Chief Engineer. Nine years with leading manufactured gas utility as Superintendent's assistant experienced in Design, Construction and Supervision of Gas Distribution Systems. Experienced in production, commercial and other gas utility fields. 36—married. **1506.**

Experienced Executive and Engineer. Has had charge of all engineering, design, construction, operation and maintenance incident to all functions of Gas Industry, both manufactured and natural gas including, for the past twenty years, major supervision of the industrial utilization of gas in one of the largest city's many industries. **1507.**

Operating Executive and General **Manager** familiar with all phases of gas production and distribution. Technical education, M.E. degree, with wide experience including considerable sales. Rehabilitation work a specialty. Now employed but available for attractive opportunity. Further details on request. **1508.**

Sales Executive with large acquaintance gas and electric utilities in Eastern states—have technical education and employed as sales manager for large manufacturer gas appliances for 13 years—will consider any line with possibilities —available after January 15th. **1510.**

POSITIONS OPEN

A Mid-Eastern gas company has opening for experienced **assistant Gas Superintendent.** Prefer man experienced in manufactured gas operations and maintenance to assist Gas Superintendent in the operations of the property. Some distribution experience desirable but not absolutely necessary. Reply giving full details of education, experience, salary and date available. **0439.**

Distribution Superintendent: Opportunity for competent man to take complete charge of all distribution activities of medium and low pressure manufactured gas system serving 20,000 customers. Responsibility includes service activities, appliance installation and repairs and meter shop operation. Location, Southeastern Section. Replies will be treated in strict confidence. **0440.**

Industrial Sa'es Engineer—Medium Sized Southern Utility just converting to natural gas requires the services of a man 35 or under with good technical education and experience. Start January first. Write fully giving experience and salary expected. **0441.**

Public Utility requires experienced Graduate **Home Economics Representative** to take charge of department which will be organized consisting of one director and one or two assistants. Activities will include platform lectures, and other home service work covering foods and proper uses of appliances. Please write and give qualifications, age, education, experience, salary expected, etc. Correspondence strictly confidential. Good salary and excellent opportunity for advancement. **0442.**

House Heating Engineer—Medium sized Southern utility just converting to natural gas requires the services of a man 35 or under with good technical education and experience. Start January first. Write fully giving experience and salary expected. Enclose photo if available. **0443.**

Heating Engineer with experience in the testing of gas fired low pressure heating boilers. Must be capable of conducting tests in different cities in order to obtain approval of product. Excellent opportunity with old established boiler company in Pennsylvania. Write fully. **0444.**

ADVISORY COUNCIL

ERNEST R. ACKER.....Poughkeepsie, N. Y.
F. M. BANKS.....Los Angeles, Calif.
BURT R. BAY.....Omaha, Neb.
LYMAN L. DYER.....Dallas, Texas
RALPH L. FLETCHER.....Providence, R. I.
B. H. GARDNER.....Columbus, Ohio
GEORGE S. HAWLEY.....Bridgeport, Conn.
FRANK E. HOENIGMANN.....Chicago, Ill.
W. ALTON JONES.....New York, N. Y.
L. E. KNOWLTON.....Providence, R. I.
MALCOLM LEACH.....Taunton, Mass.
J. L. LLEWELLYN.....Brooklyn, N. Y.
H. N. MALLON.....Bradford, Pa.
L. A. MAYO.....Hartford, Conn.
C. E. PACKMAN.....Chicago, Ill.
BRUNO RAHN.....Milwaukee, Wis.
O. H. RITENOUR.....Washington, D. C.
W. F. ROCKWELL.....Pittsburgh, Pa.
LOUIS RUTHENBURG.....Evansville, Ind.
B. A. SEIPLE.....Asbury Park, N. J.
C. V. SORENSON.....Hammond, Ind.
MARCY L. SPERRY.....Washington, D. C.
J. H. WARDEN.....Tulsa, Okla.
R. E. WERTZ.....Amarillo, Texas
HARRY K. WRENCH.....Minneapolis, Minn.
CHARLES G. YOUNG.....Springfield, Mass.

AFFILIATED ASSOCIATIONS

Association of Gas Appliance and Equipment Manufacturers
Pres.—Lyle C. Harvey, Bryant Heater Co., Cleveland, Ohio
Man. Dir.—H. Leigh Whitelaw, 60 East 42nd St., New York, N. Y.

Canadian Gas Association
Pres.—J. D. von Maur, Consumers Gas Co. of Toronto, Toronto, Ont.
Exec. Sec.-Tr.—George W. Allen, 7 Astley Ave., Toronto.

Gas Meters Association of Florida-Georgia
Pres.—W. H. Duguid, Jacksonville Gas Corp., Jacksonville, Fla.
Sec.-Tr.—B. G. Duncan, Florida Power Corp., Orlando, Fla.

Illinois Public Utilities Association
Pres.—C. W. Organ, Central Illinois Light Co., Springfield, Ill.
Sec.-Tr.—T. A. Schlink, Central Illinois Light Co., Springfield, Ill.

Indiana Gas Association
Pres.—Herman G. Horstman, Public Service Co. of Indiana, Inc., Indianapolis, Ind.
Sec.-Tr.—Paul A. McLeod, Public Service Co. of Indiana, Inc., 816 Traction Terminal Building, Indianapolis 9, Ind.

Michigan Gas Association
Pres.—Henry Fink, Michigan Consolidated Gas Co., Detroit, Mich.
Sec.-Tr.—A. G. Schroeder, Michigan Consolidated Gas Co., Grand Rapids, Mich.

Maryland Utilities Association
Pres.—Henry S. Davis, Conowingo Power Co., Elkton, Md.
Sec.—Raymond C. Brehaut, Washington Gas Light Co., Washington, D. C.

Mid-Southeastern Gas Association
Pres.—A. E. Jones, Tidewater Power Co., Wilmington, N. C.
Sec.-Treas.—Edward W. Ruggles, North Carolina State College, Raleigh, N. C.

Mid-West Gas Association
Pres.—Burt R. Bay, Northern Natural Gas Co., Omaha, Neb.
Sec.-Tr.—Roy B. Searing, Sioux City Gas & Electric Co., Sioux City, Iowa.

Missouri Association of Public Utilities
Pres.—J. F. Porter, Jr., Kansas City Power & Light Co., Kansas City, Mo.
Gen. Counsel—Wm. H. Allen, 101 W. High Street, Jefferson City, Mo.
Sec.—E. A. Beer, 101 W. High Street, Jefferson City, Mo.

Natural Gas and Petroleum Association of Canada
Pres.—Major E. Sweet, Brantford, Ont.
Sec.-Tr.—S. A. Morse, Union Gas Co. of Canada, Ltd., Chatham, Ont.
Asst. Sec.—Jos. McKee, United Gas and Fuel Co. of Hamilton, Ltd., Hamilton, Ont.

New Jersey Gas Association
Pres.—Frank H. Darlington, Peoples Gas Co., Glassboro, N. J.
Sec.-Tr.—H. A. Sutton, Public Service Electric and Gas Co., Newark, N. J.

Oklahoma Utilities Association
Pres.—D. S. Kennedy, Oklahoma Gas and Electric Co., Oklahoma City, Okla.
Sec.—Kate A. Niblack, 625 Biltmore Hotel, Oklahoma City, Okla.

Pacific Coast Gas Association
Pres.—H. W. Edmund, Coast Counties Gas and Electric Co., Santa Cruz, Calif.
Man. Dir.—Clifford Johnstone, 447 Sutter St., San Francisco, Calif.

Pennsylvania Gas Association
Pres.—Louis C. Smith, Harrisburg Gas Co., Harrisburg, Pa.
Sec.—William Naile, Lebanon Valley Gas Co., Lebanon, Pa.

Pennsylvania Natural Gas Men's Association
Pres.—Dan S. Keenan, Carnegie Natural Gas Co., Pittsburgh, Pa.
Exec. Sec.—Mark Shields, 2619 Grant Bldg., Pittsburgh, Pa.

Southern Gas Association
Pres.—Frank S. Kelly, Jr., Arkansas Louisiana Gas Co., Shreveport, La.
Sec.-Tr.—L. L. Baxter, Arkansas Western Gas Co., Fayetteville, Ark.

Wisconsin Utilities Association
Pres.—M. H. Montross, Wisconsin Public Service Corp., Wausau, Wis.
Exec.-Sec.—A. F. Herwig, 135 West Wells St., Milwaukee, Wis.

AMERICAN GAS ASSOCIATION

HEADQUARTERS, 420 LEXINGTON AVE., NEW YORK 17, N. Y.

A. G. A. TESTING LABORATORIES • 1032 East 62nd Street, Cleveland 14, Ohio • 1425 Grande Vista Avenue, Los Angeles 23, Calif.
WASHINGTON OFFICE: Albee Bldg., Washington 5, D. C.

◀ OFFICERS ▶

President ..... PRESTT J. BOOTHBY ..... Philadelphia, Pa.
First Vice-President ..... R. H. HARGROVE ..... Shreveport, La.
Second Vice-President ..... HUDSON W. REED ..... Philadelphia, Pa.
Treasurer ..... EDWARD E. BARRETT ..... New York, N. Y.
Assistant Treasurer ..... V. T. MILES ..... New York, N. Y.
Managing Director ..... H. CARL WOLF ..... New York, N. Y.
Secretary ..... KURWIN R. BOYES ..... New York, N. Y.

◀ DEPARTMENT CHAIRMEN ▶

Manufactured Gas Department ..... HUDSON W. REED ..... Philadelphia, Pa.
Natural Gas Department ..... R. H. HARGROVE ..... Shreveport, La.

◀ SECTION VICE-PRESIDENTS AND CHAIRMEN ▶

Accounting Section ..... E. F. EMBREE ..... New York, N. Y.
Residential Gas Section ..... J. J. QUINN ..... Boston, Mass.
Industrial & Commercial Gas Section ..... HARRY A. SUTTON ..... Newark, N. J.
Manufacturers' Section ..... FRANK H. ADAMS ..... Buffalo, N. Y.
Publicity & Advertising Committee ..... CHARLES A. TATTERSALL ..... Syracuse, N. Y.
Technical Section ..... LESTER J. ECK ..... Minneapolis, Minn.

◀ DIRECTORS ▶

R. G. BARNETT ..... Portland, Ore.
WALTER C. BECKJORD ..... Cincinnati, Ohio
ARTHUR F. BRIDGE ..... Los Angeles, Calif.
FLOYD C. BROWN ..... Chicago, Ill.
JAMES A. BROWN ..... New York, N. Y.
CHARLES M. COHN ..... Baltimore, Md.
E. H. EACKER ..... Boston, Mass.
HENRY FINE ..... Detroit, Mich.
R. E. FISHER ..... San Francisco, Calif.
J. N. GREENE ..... Birmingham, Ala.
H. E. HANDLEY ..... Jackson, Miss.
LYLE C. HARVEY ..... Cleveland, Ohio
D. A. HAUCK ..... Buffalo, N. Y.
HENRY H. MORSE ..... Cleveland, Ohio
NORTON McLEAN ..... Albany, N. Y.
E. P. MOFFEL ..... New York, N. Y.
C. E. PAIGE ..... Binghamton, N. Y.
J. FRENCH ROBINSON ..... Cleveland, Ohio
HERMAN RUSSELL ..... Rochester, N. Y.
A. SCHATTACK ..... Tampa, Fla.
T. J. STRICKLER ..... Kansas City, Mo.
E. J. TUCKER ..... Toronto, Ont.
P. S. YOUNG ..... Newark, N. J.

◀ ASSOCIATION STAFF ▶

Managing Director ..... H. CARL WOLF
Assistant Managing Director ..... JOHN W. WEST, JR.
Assistant Managing Director and Director, Natural Gas Dept. ..... GEORGE H. SMITH
Secretary ..... KURWIN R. BOYES
Secretary, Manufactured Gas Dept. and Technical Section ..... A. GORDON KING
Controller and Secretary, Accounting Section ..... O. W. BREWER
Secretary, Industrial-Commercial Gas Section ..... EUGENE D. MILENER
Secretary, Residential Gas Section ..... F. W. WILLIAMS
Home Service Consultant ..... JESSIE MCQUEEN
Editor, A. G. A. MONTHLY ..... JAMES M. BEALL
Director of Promotion ..... JOHN H. WHITE, JR.
Director, New Freedom Gas Kitchen Program ..... H. KINTON FOSTER
Director, Advertising ..... CHARLES W. PEARSON
Director, Publicity ..... GEORGE A. MACDONALD
Director, Statistical Bureau ..... WALTER R. CAIN
Director, Testing Laboratories (Cleveland, Ohio) ..... R. M. CONNER
Supervisor, Pacific Coast Branch Laboratories (Los Angeles, Calif.) ..... PAUL ROGERS
Secretary-Coordinator, Gas Production Research Committee ..... EDWIN L. HARP
Fuel Consultant (Washington, D. C.) ..... GEORGE W. ALLEN
Utilization Engineer ..... C. LINDSAY MOSELEY